MANUFACTURERS' RECORD

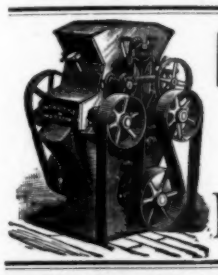
A Weekly Southern Industrial and Hardware Newspaper.

VOL. 10. No. 10. WEEKLY. | BALTIMORE, OCTOBER 16, 1886. | $3.00 A YEAR. SINGLE COPIES, 10 CENTS.

Sole Manufacturers of
EUREKA PACKING
Steam, Hydraulic and Locomotive Packing, OF EVERY DESCRIPTION.
Send for Prices.

JAS. SMITH & CO.
Works, 413 to 421 Race St., Cor. of Crown.
Office & Store, 137 Market St., Philadelphia.

Dealers in
MANUFACTURERS', MILL and ENGINEERS' SUPPLIES
OF EVERY DESCRIPTION.
CIRCULARS AND PRICE-LISTS MAILED UPON APPLICATION.



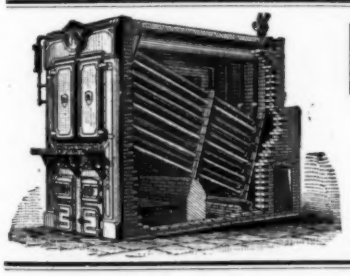
Milling Outfits for Flour and Meal.
WE MAKE ROLLS AND PORTABLE MILLS COMPLETE.
Manufactory Established in 1851. Pamphlets with Prices Mailed Free.
NORDYKE & MARMON CO., INDIANAPOLIS, IND.

ELEVATORS
Send for Illustrated Circulars.

MORSE ELEVATOR WORKS.
MORSE, WILLIAMS & CO. Successors to CLEM & MORSE
Manufacturers and Builders of HYDRAULIC STEAM, BELT and Hand-Power, PASSENGER and FREIGHT ELEVATORS With most approved Safety Devices. Dumb-Waiters, Automatic Hatch-Doors, &c.
Office: 411 CHERRY STREET,
Works: FRANKFORD AVE., WILDEY & SHACKANAXON STS. PHILADELPHIA, PA.
Branch Office, 108 Liberty Street, NEW YORK.

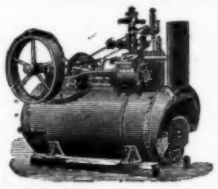
NOTICE TO
Engineers, Contractors,
MINING MEN,
AND OTHERS INTERESTED IN
Tunneling, Shaft-Sinking, Etc.

Engineers' Tables of Progress
With Maps, Illustrations, and Full Description of the
New Croton Aqueduct Tunnel
NEW YORK: Size 16x16 feet; length 36 miles.
Third Edition now Ready. Sent free on Application.
INGERSOLL ROCK DRILL CO., 10 Park Place, New York.



ROOT'S NEW WATER TUBE STEAM BOILER,
Safe, Economical, Durable.
Abendroth & Root Manufacturing Co.
28 CLIFF STREET, - - - - NEW YORK.

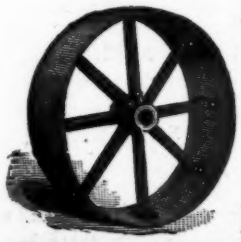
SELLING AGENTS:
DANIEL KELLY, 51 N. Seventh St., Phila., Pa.
A. S. FISKE, 48 Johnston Build'g, Cincinnati, O.
R. L. WEEKS, 151 Griswold St., Detroit, Mich.
WM. H. SMITH, 5 Custom House St., Providence, R.I.



Plantation Engines 8, 10 and 16 HORSE POWER.
FOR DRIVING Cotton Gins & Mills. With Return Flue Boilers.
Illustrated Engine Pamphlet Sent Free.

THE "OLD RELIABLE"
"Jas. Leffel Turbine Wheel"
The Best Water Wheel Ever Built.
If you are in need of a new or second-hand Wheel, write for our new Pocket Water Wheel Book for 1886. Address
JAS. LEFFEL & CO., 68 & 69 Wayne St., Springfield, OHIO, or 110 Liberty St., NEW YORK.

THE MEDART PATENT
WROUGHT RIM PULLEY.

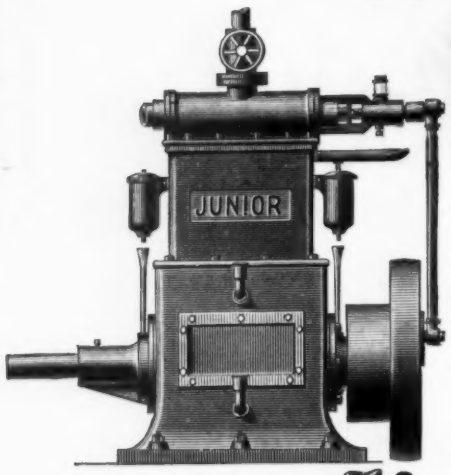


OVER 300,000 NOW IN USE. THE LIGHTEST, STRONGEST, BEST BALANCED and CHEAPEST in the WORLD.
Shafting, Hangers, Couplings, &c.
MEDART PATENT PULLEY CO., 1206 TO 1214 N. MAIN STREET, ST. LOUIS, MO.
Stores: 99 to 101 W. Second St., Cincinnati. 24 & 26 S. Canal St., Chicago.

FRANK W. SWETT, MANUFACTURER OF BAND SAWS, 69 SOUTH CANAL ST. CHICAGO, ILL. EVERY BLADE WARRANTED.

THE WESTINGHOUSE MACHINE CO.

OF PITTSBURGH, Manufacturers of



Westinghouse Automatic Engine

AND

The "Junior" Automatic Engine.

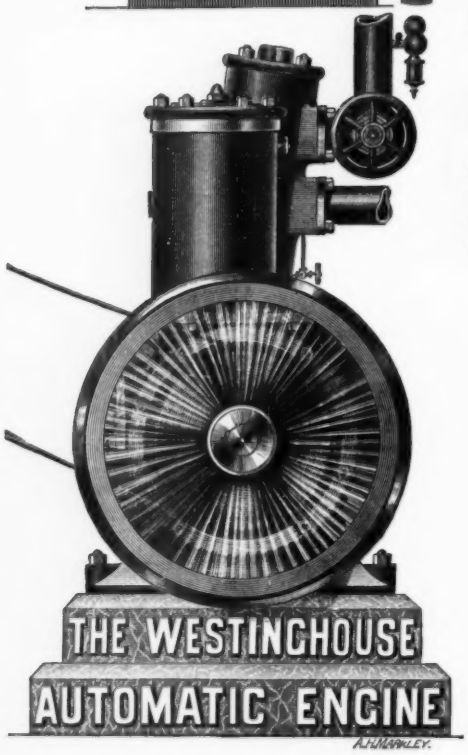
Enjoying the Largest Market of any Engine manufactured in the United States, we shall further enlarge it by a Rebate to the Purchaser of a share of our earnings in the shape of a

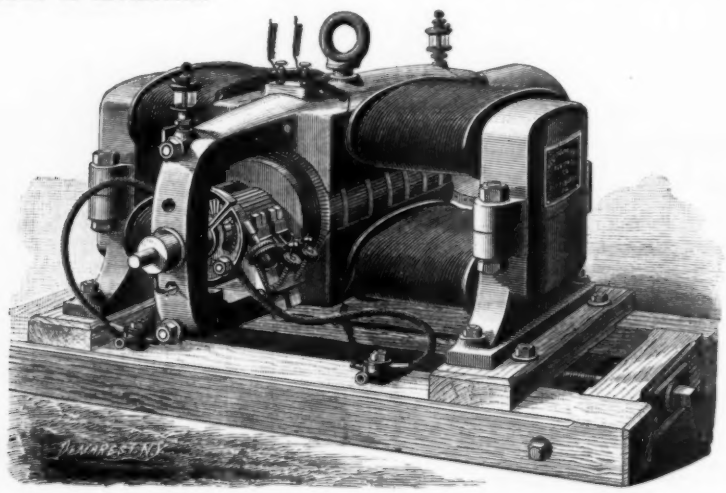
GENERAL REDUCTION IN PRICE.

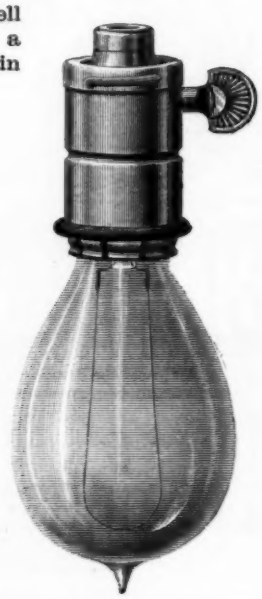
The First Reduction is now in effect, and others will follow as results warrant. All our Latest Improvements are in force. THE "JUNIOR" AUTOMATIC ENGINE is a Special Design for the Legitimate Low-Priced Trade. Sizes, 15, 25 and 35 H. P. only, which we

SELL AT A PRICE THAT CANNOT BE MET

by the Cheapest Throttling Engines. Forged Steel Shafts and Rods. Well built and serviceable. Add to the above, Absolute Uniformity of Parts, a Priced Repair List, and 200 Engines always in Stock, and our position in the Trade is invincible.







The WESTINGHOUSE ELECTRIC COMPANY

OF PITTSBURGH, is Conceded to Manufacture

"The Gilt Edged" Incandescent System

ELEGANT DETAILS FOR ISOLATED PLANTS. TRAINED ENGINEERS IN STEAM AND ELECTRICAL DEPARTMENTS.

UNDIVIDED RESPONSIBILITY.

The Construction of Central Stations

IS OUR SPECIAL FIELD, IN WHICH WE ARE FAR IN ADVANCE OF ALL COMPETITION.

Capital Investing for Dividends will do well to close no Contracts until our System is investigated and our Proposals considered.

Contracting Department for the United States in charge of

WESTINGHOUSE, CHURCH, KERR & CO., 17 Courtlandt St., New York. 98 Fourth Ave., Pittsburgh.

FAIRBANKS, MORSE & CO., Chicago. FAIRBANKS & CO., St. Louis. D. A. TOMPKINS & CO., Charlotte, N. C.

AND FOR ENGINES ONLY,

PARKE & LACY, - - SAN FRANCISCO, CAL.
PARKE, LACY & CO., - - SALT LAKE, UTAH.
ROBERT MIDDLETON, - - MOBILE, ALA.
H. DUDLEY COLEMAN, - NEW ORLEANS, LA.
KEATING IMPLEMENT & MACHINE COMPANY, DALLAS, TEXAS.

FOREIGN AGENTS.

IMRAY & CO., - - - SYDNEY, AUSTRALIA.
R. ROGERS, - - - - - PARIS, FRANCE.
J. PARKER READ, - - VALPARAISO, CHILI.
THOMAS G. FOLEY & CO., - - BUENOS AYRES, ARGENTINE REPUBLIC.
F. E. AVERILL, - - - - DELFT, HOLLAND.
J. ARCE & CO., - - - - MEXICO, MEX.
PAUL GIRARDONI, - - - VIENNA, AUSTRIA.
CARBONE & GIRARDONI, - - GENOA, ITALY.

Licensed Manufacturers for Great Britain and India, ALLEY & MACLELLAN, Glasgow, Scotland.

SACO WATER-POWER MACHINE SHOP,

BIDDEFORD, MAINE,

Manufacturers of

COTTON ✻ MACHINERY

OF THE MOST IMPROVED PATTERNS.

CARDS,

Cylinders, 36x36 and 36x30, with 20 tops and Self-Strippers and Railway Troughs. Union Cards, with workers, strippers and tops.

FINISHER RAILWAY HEADS.

DRAWING FRAMES, ANY LENGTH, WITH 3, 4 AND 5 LINES OF STEEL ROLLERS.

English Slubbers and Fly Frames, With Long or Short Bolsters.

BOBBINS—12x6, 11x5½, 10x5, 9x4½, 8x4, 7x3½, 6x3, and 5x2½.

RING SPINNING FRAMES, 2, 1¾, 1⅝ AND 1½ INCH RINGS.

TWISTERS.

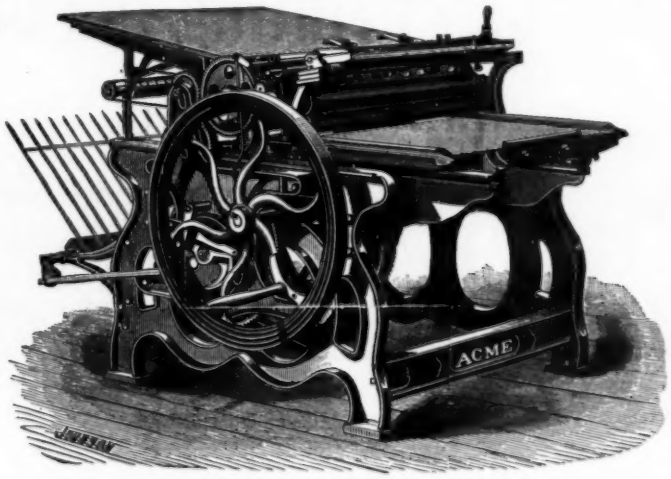
SELF-ACTING MULES, Parr, Sharp and Roberts' and Higgins' Pattern, 1⅝, 1 5-16, and 1¼-inch Gauge.

S. W. RICHARDSON, Treasurer,
No. 1 Simmons Building, Boston.

JAS. H. McMULLAN, Agent,
Biddeford, Maine.

The ACME Improved Two-Revolution Press.

FOR NEWSPAPER OR JOB WORK.



FOR STEAM OR HAND POWER.

These Presses combine, in a thoroughly perfected machine, many features whose value will be readily appreciated, including several which have never been practically developed by any Cylinder Press. Among these features are: Compact and firm in all its adjustments; the most perfect two-roller ink distribution; speed combined with perfect registration; slow movement of the bed during the impression, and quick return; suspending the impression; suspends the grippers, guides and ink; ink can be distributed without inking form; unlimited rolling of the form; composition rollers interchangeable; feeder can suspend action of the ink fountain; impression adjustable while the Press is in operation; whole form accessible for correction on the Press; quiet operation without jar; great saving in wear of type; convenient height of bed.

The present hand-power Acme Presses fully equal, in capacity for fine work, the *first-class* two-roller Presses of other kinds, and they run much easier, and are also capable of higher speed by steam than any other Cylinder Press manufactured for country offices or for hand operation. The convenience of changing from newspaper to poster and job work is unequalled.

PRICES, - - $900 to $2,500.

Circulars, with sizes and prices, will be sent on application.

C. C. CHILD, MANUFACTURER,

64 Federal Street, Boston, Mass.

Porter Mnfg. Co., Limited.

HOWARD G. WHITE, Prest.
J. H. CHILDS, Vice-President.
G. A. PORTER, Sec. & Treas.

SYRACUSE, N. Y., U. S. A.

MANUFACTURE

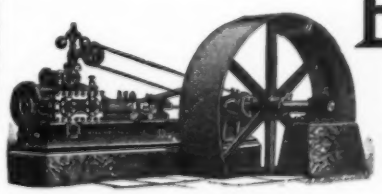
—STATIONARY AND PORTABLE—

ENGINES

(ALL SIZES.)

For Every Duty.
Centre Crank Stationery.
Trunk Bed. Double.
Variable Cut-off. Square Bed.

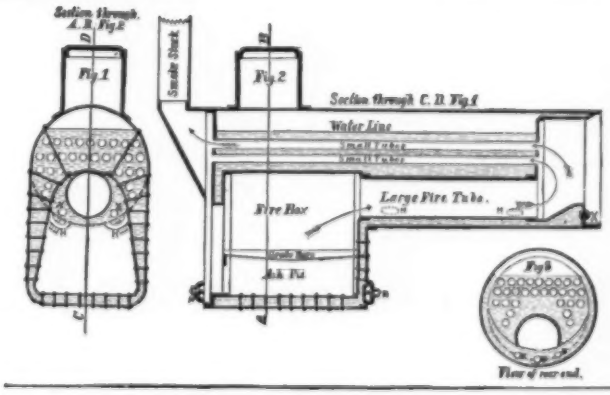
BOILERS



That Cannot Explode,
and have many other
Valuable Features.

Illustrated Catalogue and Prices upon Application.

—Mention "Manufacturer's Record."—



LIST OF SOUTHERN AGENTS:

WM. R. EMERSON, Baltimore, Md. S. S. NASH & CO., Tarboro, N. C. VALK & MURDOCH, Charleston, S. C. A. G. SMITH, Live Oak, Fla. DAWSON & EVANS, La Grange, Ga. LYONS THOMAS HARDWARE CO., Paris, Texas. R. L. COBB & CO., Little Rock, Ark. ATKINSON HARDWARE CO., Fort Smith, Ark. M. FALER & CO., Hazlehurst, Miss. KENTUCKY MACHINERY CO., Louisville, Ky.

E. W. BLISS CO.

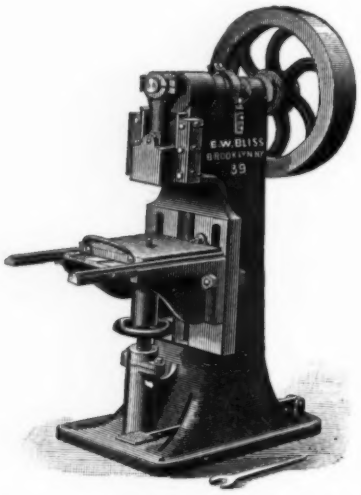
—MANUFACTURERS OF—

Presses, Dies,

—AND—

SPECIAL ✣ MACHINERY

FOR WORKING SHEET METAL.



Double Seaming Machines, CIRCULAR SHEARS, Squaring Shears, Can Making Machinery, &c.

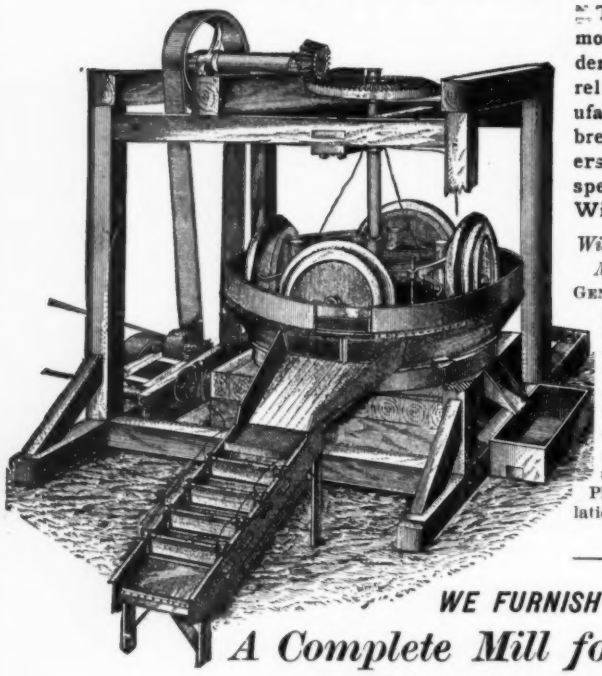
Works: Plymouth, Pearl & John Sts. Office, 17 Adams St.,

BROOKLYN, N. Y.

WISWELL

Ore Pulverizer and Amalgamator

COMBINED.



The following testimonial from Mr. Marsden, of the firm of Farrel & Marsden, manufacturers of stone-breakers & ore-crushers, Ansonia, Conn., speaks volumes for the Wiswell Mill:

Wiswell Electric Mining Machinery Co.:

GENTLEMEN: After carefully inspecting your mill and seeing it in operation, I do not hesitate to say that it is one of the best, if not the best pulverizer and most complete gold saving machine I have ever seen.

Please accept congratulations for your success.

S. L. MARSDEN.

WE FURNISH

A Complete Mill for $2,500

DELIVERED ON BOARD CARS.

For further information address

WISWELL

Electric Mining Machinery Company,

A. A. REEVE, Treas. 4 Post-Office Square, Boston, Mass.

JANNEY & CONGDON

Baltimore, Md.

HEADQUARTERS FOR

Goodyear's Rubber Goods.

RUBBER AND LEATHER BELTING,

Lace Leather, Machine Packing, Rubber, Cotton and Linen Hose, Steam Suction and Brewers' Hose.

Steam Fire Engine Hose, and Tubing.

Fire Buckets, Mats and Matting.

RUBBER BOOTS Heavy, Medium and Light Weight AND **SHOES. CLOTHING.**

Horse Covers, Wagon Aprons, Druggists' Goods, Stationers' Goods, Air Pillows, Air Beds, Cushions, Nursery Sheeting, Hospital Sheeting,

And Everything in Goodyear's Rubber Goods, Wholesale and Retail.

Janney & Congdon, BALTIMORE, MD. CATALOGUE ON APPLICATION.

Queen City Printing Ink Co.

CINCINNATI, OHIO.

THE INK WITH WHICH THIS PAPER IS PRINTED IS MADE BY THE QUEEN CITY PRINTING INK CO CINCINNATI, O.

MANUFACTURERS OF ALL DESCRIPTIONS OF

INKS!

Varnishes and Sizes

FOR PRINTERS' USE.

New York Office, · · · 194 William Street.

Philadelphia Office, · · 434 Walnut Street.

HOWARD & BULLOUGH'S

OPENERS, LAPPERS, REVOLVING FLAT CARDS, ELECTRIC STOP MOTION DRAWING FRAMES, SLUBBING, INTERMEDIATE, ROVING AND FINE JACKS, (NEW PATTERNS 1886) ALL MADE BY TOOL WORK; EVERY PART EITHER TURNED, MILLED OR PLANED, AND CONTAINING MANY PATENTED AND VALUABLE IMPROVEMENTS. WARPERS, COPPER CYLINDER SLASHERS, (New Models.)

SOLE IMPORTERS,

RILEY & GRAY, - - BOSTON, MASS.

CARD CLOTHING, WOOLEN AND WORSTED MACHINERY, Etc., Etc.

The Whitin Machine Works

J. LASSELL, President and Treasurer G. E. TAFT, Agent. H. ELLIS, Superintendent.

MANUFACTURERS OF

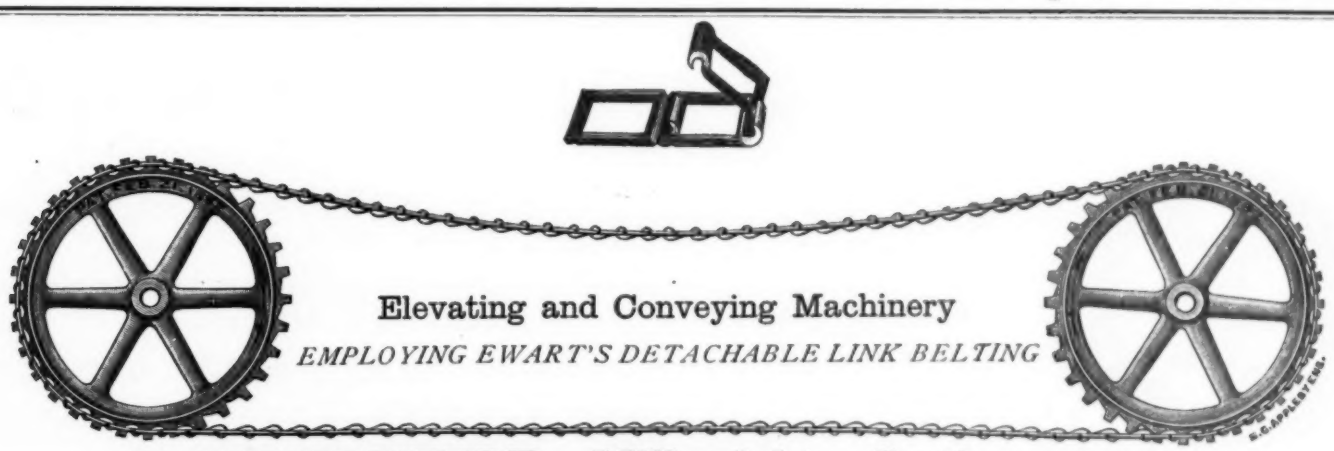
COTTON MACHINERY

Openers, Lappers, Cards, Railway Heads, Drawing, Ring Spinning,

SPOOLERS, WET and DRY TWISTERS, REELS,

—WARPERS, DRESSERS, LOOMS, &c.,—

Whitinsville, Worcester County, MASS.



Elevating and Conveying Machinery

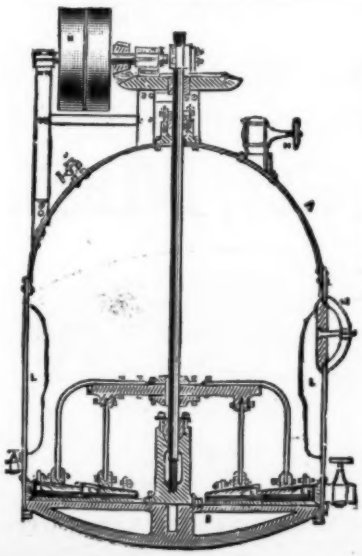
EMPLOYING EWART'S DETACHABLE LINK BELTING

R. SWORMSTEDT, Millwright, Southern Agent,

7 SOUTH FREDERICK STREET, BALTIMORE, MD.

☞ *Illustrated Catalogue Sent on Application.* ☞ *Correspondence Solicited.*

MILL SUPPLIES OF ALL DESCRIPTIONS.



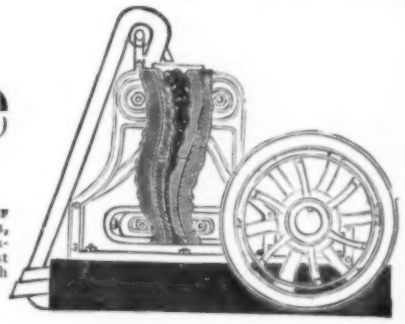
THE MEECH GOLD AND SILVER ORE

Disintegrating Machine

The Only Method for Preparing the Ore for Amalgamation.

Disintegrating, Decomposing and Desulphurizing the ore under a HIGH TEMPERATURE and PRESSURE OF STEAM HEAT, with chemical action and attrition, dissolves and breaks up the chemical combination in the ores, individualizing, cleaning and separating the atoms of metal from the gangue, perfectly freeing them for amalgamation in combination with the MEECH AMALGAMATION MACHINE and process, (being the greatest combination of Amalgamation known,) will successfully extract 90 per cent. of the metal from rebellious ores, such as Sulphurets, Sulphates, Sulphides, Chlorides, Bromides, Oxides, Tellurides, &c.

☞ We desire business correspondents in every mining district in the United States.



THE MEECH CRUSHER AND PULVERIZER.

This Machine will **CRUSH AND PULVERIZE GOLD AND SILVER ORES** to 20, 40, and 60 mesh fine, and from 20, 40 and 60 tons **per day.** The **principles** of this machine, making it superior to all others, are the peculiar concave and convex shape of the jaws, with concave and convex projections, which breaks, crumbles, stamps and pulverizes the ore with less power, wear and tear, than any other machine. MANUFACTURED BY

MEECH & CO., Cleveland, Ohio.

We will contract to erect the **Meech Plant of Mining Machinery** for successfully treating all grades of gold and silver ore.

The DEANE STEAM PUMP CO.

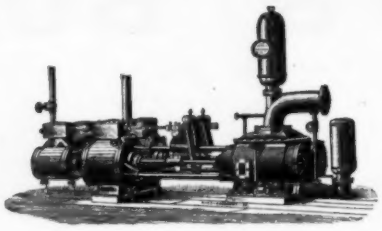
—HOLYOKE, MASS.—

BUILD

STEAM ❊ PUMPING ❊ MACHINERY

OF EVERY VARIETY.

Send for New Catalogue No. 22.



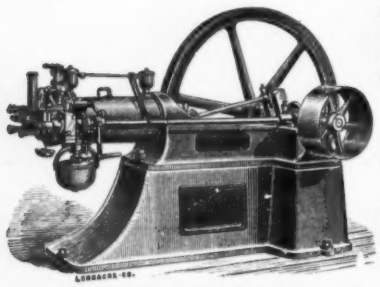
The DEANE STEAM PUMP CO.

NEW YORK, BOSTON,
CHICAGO, PHILADELPHIA, ST. LOUIS,

MAKE A SPECIALTY OF

Water Works ENGINES

FOR THE SUPPLY OF CITIES AND TOWNS.



Over 18,000 in Use. **Otto Gas Engine** 20 to 70 per ct. less Gas consumption than ANY OTHER ENGINE.

Working Without Boiler, Steam, Coal, Ashes or Attendance.

Started instantly by a Match, it gives full power immediately. When stopped, all expense ceases.

No explosions, no fires nor cinders, no gauges, no pumps, no engineer or other attendant while running. Recommended by insurance companies. UNSURPASSED IN EVERY RESPECT for hoisting in warehouses, printing, ventilating, running small shops, &c. **Sizes: 1 to 25-Horse power.**

Branch Office, 130 Washington St., Chicago. **OTTO GAS ENGINE WORKS, Schleicher, Schumm & Co.** 33d & WALNUT STS., PHILADELPHIA.

To Cotton Manufacturers.

DON'T USE OLD AND WORN-OUT MACHINERY

We Make THE BEST. Get it and make a Profit on Your Production.

GEORGE DRAPER & SONS, - - - Hopedale, Mass.

Telegraph Address and Railroad Station, MILFORD, MASS.

SERGEANT'S 'TRIUMPH' ROCK DRILL

Is More Simple in Construction, More Effective in Operation, and

REQUIRES LESS REPAIR

THAN THE BEST-KNOWN ROCK DRILLS IN THE MARKET.

We are Prepared to Prove the Above Statement.

AGENTS FOR THE NORWALK AIR COMPRESSOR.

Correspondence Solicited and Estimates Furnished for all Kinds of MACHINERY Required in MINING, QUARRYING or CONTRACT WORK.

ADDRESS,

Sergeant Drill Co., 16 Dey St., New York.

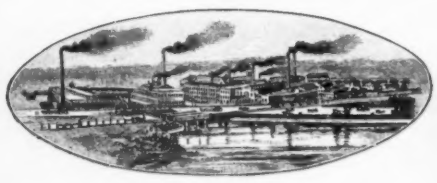
Established 1827. Manufactory at Newark, N. J.

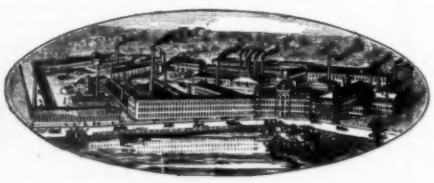
T. G. SELLEW, Manufacturer of **DESKS** OFFICE and LIBRARY —FURNITURE,—

111 Fulton Street, NEW YORK. Fine Cylinder and Roll Top Desks a Specialty.

Washburn & Moen Mnfg. Co., Worcester, Mass.

MANUFACTURERS OF





Iron, Steel and Copper Wire, Wire Rope, Barbed Wire.

NEW YORK WAREHOUSE, 16 Cliff Street.— —CHICAGO WAREHOUSE, 107 Lake Street.

BALTIMORE
Manufacturers' Record.
PUBLISHED EVERY SATURDAY BY THE
MANUFACTURERS' RECORD CO.

J. W. BIGSBY, *Prest.*
R. H. EDMONDS, *Treas.*
WM. H. EDMONDS, *Secty. & Manager.*

R. H. EDMONDS, EDITOR.

—OFFICE,—
71 and 73 Exchange Place, Cor. Commerce St.,
—BALTIMORE.—

NEW YORK OFFICE:
Room 6, No. 118 Fulton Street.

SUBSCRIPTION $3.00 A YEAR.

BALTIMORE, OCTOBER 16, 1886.

Need of Banking Capital in the South.

We have frequently had urged upon us by business men in various localities in the South the need of more banks, and our editorials on this subject have elicited favorable comment throughout the South and have attracted considerable attention among capitalists in the North As a result of correspondence occasioned by some of our recently published articles on this topic, we think a union for this purpose, between Northern capital and Southern need, can be brought about, and we shall be glad to present the claims of any town where banks are needed or where there are banks needing additional capital. Parties desiring to be put in correspondence with capitalists with this object in view can communicate with us. Of course communication of this sort must come from some responsible source. A simple vague statement that "a bank is badly needed here" is too indefinite to receive attention.

Free Trade Blunders.

Our free trade friends are fond of asserting that protection is an imposition, that the name is a cover for robbery of the meanest kind, and they propose, with an assumption of earnestness, "to call things by their right names, and to arouse an injured people to a realization of the wrongs they are unconsciously enduring." Usually they begin the operation by claiming that the tariff now in force was a war measure, and that the necessity for it having passed the heavy taxes collected for the extraordinary expenses of the government should be repealed. Continuing the argument (if such it can be called) they add that it would have been done long ago, but for the manufacturers who have been made rich through protection, and who are unwilling to relinquish the large profits they now derive from the duties the law levies upon foreign products. They aim to make the people believe that were these taxes removed the prices of all manufactured goods would be reduced in the same ratio. "But," say they, "these greedy monopolists will never consent to tariff reduction, and the only way to accomplish it is to send men to Congress who will obey the people, and not the money kings of the country." While our friends shout themselves hoarse over alleged wrongs, and, while they declaim against the manufacturers as a body, they find occasionally an exception for whom they have only words of praise, for "he is in favor of free trade." "Behold him," they cry, this "honest man, this noble manufacturer. He is ready to abandon his share of the profits of protection, that the people may be relieved of their burdens." The foregoing is a fair presentation of the line of thought pursued by nearly all opponents of protection. They are wrong alike in their premises and conclusions.

It is not true that prices are higher than they would be if protection duties were removed. On the contrary, nearly every manufactured article in general use is sold much lower now than it was in 1860. While this is a fact, there is another of equal significance, viz: That the average earnings of mechanics and day laborers are double what they then were. But pseudo tariff reformers never trouble themselves about such stubborn things as facts. When they run headforemost against one they rub their bruised crowns, and, borrowing the language of another, they exclaim: "So much the worse for the facts."

We are not laboring for the country at large, however, but for the South and its interests. Since the MANUFACTURERS' RECORD began to be, we have seen Atlanta and Chattanooga, Birmingham, Anniston and Roanoke, Richmond, Norfolk, Charlotte, Durham and three-score other places of lesser note, increase in population, business and wealth, because of protection. And we have seen that the whole Southern country, from the Rio Grande to the Potomac, has been passing through an era of development without parallel in the history of this country. The business development of the Western States, marvelous as it has been as compared with that of the older States of the East, takes second place to that which is now going on at the South. The amount of capital seeking investment there is simply enormous, and the monthly record of new enterprises surpasses that of any former period in our country's history. Our Southern free trade friends fail to see that this enormous increase of manufacturing establishments in their States has somewhat to do with the change of front of individual manufacturers in other sections. It is, however, a confessed fact that this change is due to their progress. We known of one manufacturer, employing a capital of $1,000,000 and employing several thousand mechanics and laborers, who does not hesitate to say that he can no longer afford to be a protectionist (although his wealth has been accumulated since 1861), because the Southern markets will soon be supplied with wares made in that region, if protection continues, and he will lose his most profitable customers. This reasoning may be selfish, but it is sound. The South has iron, coal, timber and cheap labor; capital has found it out, and is bringing all these into use. But before goods can be made and dividends paid, millions of money must be expended in buildings and machinery, and many months must pass before the works get into successful operation. Should protective duties be removed by a gradual reduction, such as some advocate, the capital now finding its way into Southern industrial enterprises would be diverted to other channels, and the long established manufacturers could use their plants as now, without fear of losing their profitable Southern trade. We think it may be set down as an axiom, that every American manufacturer, who desires free trade, does so, not to get foreign markets for his wares, but to shut off domestic competition in the United States. The free-trade theorists, who cite such men as witnesses against protection, simply add another and greater blunder to the long list of their misconceptions.

North Carolina's Settlers.

Reference has several times been made in these columns to the convention of Northern and foreign-born settlers that will be held in Raleigh the last week of this month. From the interest manifested by the press, both in and out of the State, and from many other indications, we are led to believe that the convention will fully equal the anticipations of its projectors, and that its outcome will be of great benefit to the State itself, and, indirectly, to all Southern interests.

The citizens of Raleigh are noted for their hospitality, and they evidently intend to maintain their fair reputation at this time. The State fair, notwithstanding that in many localities the spring weather was unfavorable to the growing crops, will contain numerous fine exhibits from the four grand geographical divisions of North Carolina, sufficient of themselves to illustrate the diversity of her farms, garden and orchard products. The manufacturers of the State will generally display their wares. Managers of mining companies have signified their intention to send specimens of their ores, minerals and gems, which, added to the extensive collection of the Department of Agriculture, will enable visitors to form some conception of the vast resources of that State.

The convention is not intended to be a jovial reunion, or an occasion for lengthy addresses glowing with patriotic fervor, or adorned with poetical descriptions of the beauty and grandeur of the river, forest and mountain scenery for which that State is justly famons. These settlers have invited their Northern friends to come and see what the earth yields for the sustenance of man and beast; what the forests, mines and mountains furnish for the manufacturer, the iron founder, the lapidary and the stone cutter; what food fishes the ocean, the sounds and the rivers supply for food and for canning purposes. They propose to tell what they know about the climate, the soil, and the physical conditions which immigrants will encounter in the various sections, and to give in concise form exactly the information that every judicious man seeks to obtain before he makes choice of a new home. From first to last this is intended to be a practical affair. That there will be public and private courtesies extended to the Northern visitors must be taken for granted, for the good people of Raleigh could not let such an occasion pass without them, but these will not be permitted to interfere with the grand purpose of the convention, but will serve only as graceful concomitants to it.

This convention will in a manner illustrate the wisdom of the plan of organization of the State's Department of Agriculture. Without that institution it would have been difficult to have organized and carried forward the great preliminary work of preparation, for these settlers are scattered over an immense territory, and had no central association to act for them, and to attend to the vast correspondence and the multitude of details such an enterprise always entails. But the State Fair Association is officially represented in the department, and always works in concert with it. There is also a bureau of immigration, with a chief and his assistants, who are governed by the executive board of the department. The officers of the fair and of the immigration bureau were relied upon to do this work, and have done it untiringly and with enthusiasm. The heaviest part of it has fallen upon Commissioner Patrick, an indefatigable worker, and to him and his subordinates will be due a large part of the credit for whatever success may attend the convention. We refer to this just now, because it gives us opportunity to say that North Carolina has a department of agriculture admirably planned and ably conducted that furnishes a model many other States would find it to their advantage to adopt.

IN W. M. P's letter from Birmingham, in our issue of October 2, it was stated that during the "panic of 1883 the stock of the Elyton Land Co. was offered on the market at from 18 to 20 cents per share." This, of course, should have read in 1873 instead of 1883. The mistake was accidentally made in the office, and not by our correspondent.

THE credit for the notice of the MANUFACTURERS' RECORD, published in our last issue, should have been given to the Frederick (Md.) News instead of the Citizen.

The South's Industrial Growth.

Record of Progress in the Development of the South's Industrial Interests for Nine Months.

The industrial growth of the South continues to attract the attention of the business world. It is, indeed, the wonder of the age. Even the West, in the days of its greatest progress, probably never saw such tremendous strides of progress as some portions of the South are now making. New enterprises of gigantic proportions are following one upon the other so rapidly that there seems to be no limit to the possibilities of the South in the development of its enormous mineral wealth. The center of interest for some time has been in the progress of the iron and steel industries, and in these the activity during the last nine months has been simply startling. The most extensive enterprise of this kind ever organized in the South has just been formed by a consolidation of the Pratt Coal & Iron Co., including the Alice furnaces and the Linn Iron Works, of Birmingham, with the Tennessee Coal, Iron & Railroad Co., the new corporation having the enormous capital of $10,000,000. This company will build five large furnaces, on two or three of which work had been commenced prior to the consolidation, an extensive Basic steel plant and 1,400 coke ovens, besides opening several new coal mines. With the completion of these furnaces this company will have 10 furnaces of an aggregate daily capacity reported of 1,400 tons.

Mr. Samuel Thomas, the leading iron maker of Pennsylvania, and his friends are backing their faith in Alabama's iron possibilities with an investment of $1,000,000, and are now at work putting up one furnace, with their plans so arranged that several others can be added.

The de Bardeleben Coal & Iron Co., with a capital of $2,000,000, are building two furnaces and preparing to erect extensive Bessemer steel works. At Sheffield two 100-ton furnaces have been contracted for, and at Calera a $100,000 furnace company has been organized. A furnace has been completed at Aetna, Tenn., and the money secured for building two at South Pittsburgh, Tenn. The Coalburg Coal & Coke Co. have increased their capital from $500,000 to $700,000 with a view to building a furnace near Birmingham. At Florence an $800,000 company has been organized to build furnaces; land has been purchased at Pulaski, Tenn., for a 100-ton furnace; one of the same capacity will probably be built at Chattanooga, and at Ashland, Ky., the Ashland Coal & Iron Co. will build another furnace.

The Roane Iron Co., of Chattanooga, are building Bessemer steel rail works to turn out 150 tons a day, and the Old Dominion Iron & Nail Works, of Richmond, have contracted for large Bessemer steel works. Two large pipe works are to be built at Chattanooga, one capable of turning out 200 tons of iron a day; at Wheeling, Ala., pipe works will also be built, and at Birmingham one $200,000 stove company is under way, and one with the same capital is to be planted, either there or in Chattanooga, by Mr. John S. Perry, the great stove manufacturer of Albany, N. Y.; while of new machine shops, iron works, foundries, bridge works and similar enterprises the number is very large and steadily increasing. Surely, as a record of what has been done in the iron and steel interests alone in nine months, the foregoing is a remarkable showing.

In other lines of industry the development has been almost as great, even though it may attract somewhat less attention. In a wide diversity of new enterprises, including oil mills, cotton and woolen mills, compresses, carriage and wagon factories, flour mills, grist mills, saw mills, planing mills, and mills for making sashes, doors, blinds, furniture, shuttle blocks, handles, &c., ice factories, soap factories, electric light works and many others, there has been a rapid increase. During the last nine months this industrial growth has added to the number of manufacturing and mining enterprises in the South 42 ice factories, ranging in cost from $15,000 up to $150,000 in one case; 56 foundries and machine shops, many of them of large size, 1 Bessemer steel rail mill, 16 miscellaneous iron works, including iron pipe works, bridge and bolt works, &c.; 5 stove foundries, 19 gas works, 23 electric light companies, 8 agricultural implement factories, 114 mining and quarrying enterprises, 12 carriage and wagon factories, 9 cotton mills, 19 furniture factories, 21 water works, 44 tobacco factories, 71 flour mills, 362 lumber mills, (not counting small portable saw mills,) including saw and planing mills, sash and door factories, stave, handle, shingle, hub and spoke, shuttle block factories, &c., in addition to which there was a large number of miscellaneous enterprises.

Basing our calculations upon returns received directly by the MANUFACTURERS' RECORD, amply authenticated and verified, and in the case of incorporated companies, compared with the official reports of the State officers, we find that during the first nine months of 1886 the amount of capital, *including capital stock of incorporated companies*, represented by the new manufacturing and mining enterprises organized or chartered at the South, and in the enlargement of old plants and rebuilding of mills that were destroyed by fire, aggregates about $83,834,200. It is of course true that with some of these companies the actual cash investment is not so large as the amount of their capital stock; but there are hundreds of small manufacturing enterprises, portable saw mills, small grist mills, ginneries and similar small industries, costing from a few hundred to a thousand dollars, that are not included in this list. The aggregate cost of these would be very considerable, and partly, though not wholly, offset the too great capitalization of some incorporated companies. In addition to this, every manufacturing enterprise is constantly adding here and there a new piece of machinery, which in the aggregate is very great; but we take no account of that, only including cases where a mill is greatly enlarged, remodeled, or other extensive improvements made.

Summing up the amount of capital and *capital stock* represented by our list of new enterprises, the enlargement of old plants and the rebuilding of mills after being burned, for the first nine months of 1886, and comparing it with the figures for the corresponding time of 1885, we have:

	—First Nine Months of—	
	1886.	1885.
Alabama	$ 8,055,500	$ 5,864,000
Arkansas	14,830,000	500,000
Florida	1,219,000	1,237,000
Georgia	2,055,000	2,052,000
Kentucky	20,812,700	14,005,000
Louisiana	1,955,000	1,955,000
Maryland	6,153,000	6,107,800
Mississippi	644,000	571,500
North Carolina	2,962,200	2,543,000
South Carolina	718,000	592,000
Tennessee	7,949,000	2,300,000
Texas	4,133,000	2,280,000
Virginia	6,874,000	2,735,000
West Virginia	5,473,800	9,644,000
Total	$83,834,200	$52,386,300

These figures show an increase for the first nine months of 1886 over the same time 1885 of $31,000,500 in capital and capital stock. The industrial activity in the South during the last nine months, as indicated by these statistics, has been far greater than during the corresponding period last year. In fact, the South has, we believe, made more solid and substantial industrial progress since January 1, 1886, than ever before in the same length of time, the new industries established showing a wider diversity and a larger number of very extensive and costly enterprises than in the past.

In the following list we give the name, location and character of business of the new enterprises organized during the three months ended Oct. 1, 1886, and existing establishments rebuilt (after being burned) or enlarged etc., *having already given in our two last quarterly reviews the list for the first nine months* of 1886:

ALABAMA.

Location.	Name.	Business.
Anniston	Anniston Rolling Mill	Improved Mill.
Athens	Graber & Sons	†New Saw Mill.
Ashville	D. E. Cason	Tannery.
Birmingham	Milner, Kettig & Bell Iron Works Co.	Plumbers' Supplies, &c.
Birmingham	Alabama Iron Works	Iron Works.
Birmingham	Baxter Stove & Mfg. Co	Stove Works.
Birmingham	Birmingham Ice Fac'y Co.	Enlarged Works, &c.
Birmingham	Birmingham Soap Works	Soap Works.
Birmingham	Birmingham Fire Bck. Co	Enlarged Works.
Birmingham	Birmingham Wareh'e Mill & Elevator Co.	.....
Birmingham	Birmingham Construct. Co.	Mining, Construction, &c.
Birmingham	R. W. Boland	†Foundry.
Birmingham	Pratt Coal & Iron Co.	†2 Additional Furnaces, Steel Works and new Coal Mines.
Birmingham	Avondale Iron Works	Foundry & Elevator Wks.
Birmingham	W. R. Hill & Co.	Planing Mill.
Birmingham	Morris Mining Co	†Mining Machinery, &c.
Birmingham	Southern Fdry. & Mfg. Co.	Foundry, &c.
Birmingham	Jeffers & Thomas	Planing Mill.
Birmingham	Columbus Iron Works Co.	Ice Factory.
Brewton	Barrow & Smartt	Brick Yard.
Brewton	Union Lumber Co.	Saw Mill.
Brewton	Brewton Log Co.	Logging.
Camp Hill	W. T. Langley	Grist Mill.
Canoe Creek	S. J. Hare	Mill.
Clanton	L. F. Rollins	Mill.
Clanton	— Maull	Wagon Factory.
Clement's Dept.	Beatty & Son	Planing Mill.
Cullman	J. M. Canant & Co.	Grist Mill.
Danville	A. L. Brown	Grist Mill.
Demopolis	John C. Webb	Cotton Compress.
Florence	Florence Land, Mining & Mfg. Co.	Furnace, &c
Girard	J. C. Hughes	Broom Factory.
Hartsell	Albert Brown	Mill.
Helena	Central Iron Works	Improved Nail Mill.
Hubbard	J. C. & C. B. McLaren	Saw Mill.
Huntsville	Huntsville Cotton Mills Co.	Double Cotton Mill.
Jones Chapel	Flowers	Mill.
Kirkland	Union Lumber Co	Saw Mill.
Leeds	Cahaba Valley Land Co.	Manufactures, &c.
Mobile	Mobile Cotton Press & Warehouse Co.	Cotton Compress.
Mobile	Mobile & West Ala. R. R.	Machine Shop.
Mobile	John D. Cameron & Son	Shingle Mill.
Mobile	Gibney Iron Works	Enlarged Works.
Mobile	Electric Lighting Co.	Enlarged Plant.
Mobile	Hubbard Bros.	Enlarged Mill.
Montgomery	J. H. Hartley	Boiler Works.
Montgomery	Levin & Richard	Box Factory.
Montgomery	Chapin & Beers	Shingle Mill.
Montgomery	T. G. Hadaway	Harness & Saddle Fac.
Montgomery	Fred. Meyer and others	Ice Factory.
Montgomery	Montgomery Iron Works	Enlarged Iron Works.
Montgomery	Union Wareh'se & Elev. Co.	†Cotton Compress.
Opossum Bend	Frank Cook	Mill.
Opossum Bend	J. F. Foster	Mill.
Pollard	Pringle & Herrington	Planing Mill.
Pollard	Pollard Mill Co	Saw Mill.
Prattville	M. E. Pratt	Grist Mill & Rope Fac.
Scott's Station	J. D. & S. A. Thompson	Mill.
Selma	Matthews Cotton Mills	Add. Machinery.
Shorters Depot	McLaren Bros	Saw Mill.
Somersville	Bliven & Co	Saw Mill.
Strasburg	J. F. Maull	Wagon Factory.
Tallassee	Tallassee Falls Mfg. Co.	Add. Cotton Machinery.
Trussville	Smith & Eastman	Mining.
Tuscaloosa	Tuscaloosa Cotton Mill	Enlarged Mill.
Waterloo	— McGee	Mill.
Wheeling	Woodward Iron Co	†Pipe Fonndry.
Wilson's	F. J. McCoy	Saw Mill.
Woodstock	Cahaba Coal Mining Co.	†Mining.

ARKANSAS.

Arkansas City	Nashville & Arkan. City Land & Industrial Co.	Compress, &c.
Bear	Beam Bros	Saw and Stamp Mill.
Crystal Springs	Ostrander & Co	Mining.
Crystal Springs	S. J. McGehee	Smelter.
Crystal Springs	Berry & Burnett	Mining.
Eureka Springs	Eureka Springs Gas Lt. Co.	Gas Works.
Fort Smith	Ketchum Iron Co.	Foundry & Machine Shop.
Gassville	Cox & Denton	Flour Mill.
Hot Springs	Hot Springs Mining & Smelting Co.	Mining, Smelters, &c.
Hot Springs	B. F. Smith Smelting & Mining Co	Smelter, &c.
Knoble	R. F. Randolph	‡Saw and Shingle Mill.
Little Rock	Ferguson Bros.	‡Lumber Mill.
Little Rock	Excelsior Soapstone Works	Chinaware, &c.
Little Rock	Barnes Lumber Co.	Lumber Mill.
Little Rock	Ferguson Lumber Co.	‡Lumber Mill.
Lonoke	P. N. Clenhouse	Flour Mill.
Marshall (near)	C. A. Guthrie	Mining.
Mayberry Springs	Little Hornet Black Mud Mining Co	Mining, &c.
Pine Bluff	L. W. Bryan, Secretary	Saw Mills (5).
Pine Bluff	Emma Cottonseed Oil Co.	Improved Oil Mill.
Poplar Bluff	Oxley Stave Co.	Stave Factory.
Rector	W. H. Lehman	Brick Yard.
Rector	Rector Stave Factory	Saw Mill.

FLORIDA.

Apalachicola	Coombs & Co.	†Improved Saw Mill.
Apalachicola	Cypress Lumber Co	†Planing Mill.
Apalachicola	C. H. Smith & Co.	‡Planing Mill.
Argyle	Wm. Humphreys	Saw Mill.
Bartow	E. W. Codington	Ice Factory.
Bellview	Polly	†Planing Mill.
Beresford	Beresford Mill Co.	Saw Mill.
Broward	A. C. Harper	Saw Mill.
Camp Izard	Brown, Heidt & Co.	Brick Yard.
Cedar Key	F. A. Wolfe & Co.	Saw Mill.
Crescent City	Stephen Rollinson	‡Planing Mill.
De Leon Sprgs.	Crawford & Lee	Planing Mill.
Diego	Phillips Bros	Wood-working Factory.
Eustis	Dr. Hicks	Calcined Humus Factory.
Eustis	Florida Southern Railroad.	Dry Dock.
Holmes	D. & T. Barker	Saw Mill.
Jacksonville	J. F. Le Barron and others	Limestone Quarry.
Key West	Pino Bros	‡Cigar Factory.
Key West	E. H. Gato.	Cigar Factory.
Key West	J. H. Gregory	Cigar Factory.
Kissimmee	W. H. Curry	Saw and Planing Mill.
Lake Helen	Mace & Boardman	Saw Mill.
Lake de Funiak	J. W. Henderson	Saw, Rice & Sugar Mill.
Mount Dora	Gibbert	Saw Mill.
Myers	Welch & Co.	Tannery.
Ocala	W. W. Taylor	Sash and Blind Factory.
Owensboro	J. A. Terrill	Improved Flour Mill.
Pemberton F'ry.	Edgar & Son.	Saw and Planing Mill.
Sanford	D. M. Boyd	Mill.
Sanford	Wm. T. Cotter	Planing Mill.
Sanford	Sanford Ice & Cold Stor. Co.	‡Ice Factory.

Location.	Name.	Business.
St. Augustine	St. Augustine Ice Mfg. Co.	Ice Factory.
Suwanee	Bucki & Son	Saw Mill.
Tampa	G. S. W. Brown	Palmetto Factory.
Tampa	Tampa Ice Factory	New Ice Factory.
Tampa	Tampa Lumber Co.	New Saw Mill.
Welaka	Thorne & Coombs	‡Saw Mill.

GEORGIA.

Acworth	Acworth Broom Factory	Broom Factory.
Aerial	T. Taylor	Saw Mill.
Americus	Americus, Preston & Lumpkin Railroad.	Machine Shops.
Atlanta	Southern Phosphate Co.	Fertilizers.
Atlanta	Boyd & Baxter	Enlarged Furniture Fac.
Atlanta	Hackett & Rice Iron Fence Co.	Iron Fence Factory.
Atlanta	A. A. De Loach & Bro.	Grist Mill.
Atlanta	Hope Iron Works	Machine Shop.
Atlanta	Colquitt Chemical Co.	Fertilizer Works.
Atlanta	T. M. Acton	Broom Factory.
Atlanta	U. S. Aut. Wat. Cut Off Co.	Specialties.
Atlanta	Fulton Cotton Spinning Co.	Enlarged Cotton Mill.
Atlanta	Pendleton Guano Co.	Enlarged Works.
Augusta	Rufus Carter & Co	†Box Factory.
Augusta	Jesse Thompson and others.	Ice Factory.
Augusta	Augusta Electric Co.	†Electric Light Works.
Augusta	Foster & Doughty	Cotton Compress.
Ben Hill	James G. Barrett	‡Saw Mill.
Blakely	James Stewart	Grist Mill.
Brunswick	W. H. Durkee	Grist Mill.
Brunswick	Tobias Newman	Ice Factory.
Brunswick	C. Downing, Jr., & Co.	‡Barrel Factory.
Brunswick	Wm. H. Anderson	Wood-working Factory.
Butler		Whiffle Trees.
Cave Spring	Georgia Manganese Co.	Manganese Mining.
Cedartown	Cedartown Cotton Compress & Mfg. Co.	Compress.
Chauncey	A. B. Steel	Lumber Mill.
Clarksville	J. P. Wilson	Saw Mill.
Columbus	Swift Manufacturing Co.	Add. Cotton Machinery.
Columbus	Columbus Mfg. Co.	New Machinery.
Cumming	Kelly & Strickland	Additional Machinery.
Dalton	Crown Cotton Mills	Additional Machinery.
Dawson	Baldwin & Co. & Giese	Planing Mill.
Double Branches	Tyler & Moore	Saw Mill.
Dublin (near)	Thomas McKown	Saw Mill.
Enon Grove	T. F. Shackleford	‡Grist Mill.
Griffin	Griffin Manufacturing Co.	New Cotton Machinery.
Hawkinsville	A. M. Knight	‡Saw and Planing Mill.
La Grange	James McCosh	Flour Mill.
Liberty Hill	Fleming & Chappel	‡Saw Mill.
Mountain Hill	Cline & Smith	Grist Mill.
Nashville	B. W. Dwane & Roberts	Saw Mill.
Patterson	McDonough & Co.	†Planing Mill.
Poulan	J. W. Price	‡Saw Mill.
Rome	Hill City Gas Co.	Gas Works.
Salt Springs	E. W. Marsh & Watson	Bottling Works.
Savannah	W. S. Hawkins	‡Planing Mill.
Savannah	Standard Mfg. Co.	†Cooper Shop.
Stanfordsville	C. C. & N. Layson	Saw Mill.
Stephensville	J. F. Chappell	‡Grist and Flour Mill.
Stork	Bond & White	Saw Mill.
Taylorsville	Dorsey & Jackson	Saw Mill.
Thomaston	Moyer Bros	‡Planing Mi l.
Thomasville	Mayor & City Council	Water Works.
Waycross	Buchanan & Murphy	Saw and Planing Mill.

KENTUCKY.

Adairsville	Carroll & Barclay	Flour Mill.
Ashland	Ashland Coal & Iron Co.	Additional Furnace.
Bowling Green	J. L. Jordan	‡Saw Mill.
Covington	Ky. & Cin. Natural Gas Fuel Co.	Natural Gas, &c.
Covington	Fred. J. Meyers & Co	Enlarged Iron Works.
Crofton	K. J. Ensminger	Flour Mill.
Danville	W. G. Proctor	Flour Mill.
Falmouth	W. D. Hamilton	Flour Mill.
Franklin	Leak & Smith	Refitted Flour Mill.
Franklin	E. S. Vance	Refitted Flour Mill.
Gordonsville	Edwards & Edwards	Flour Mill.
Greenup	Greenup Stove Co.	Stove Foundry.
Guthrie	Covington & Son	Flour Mill.
Hawesville	Hawesville Roller Mill Co.	Flour Mill.
Henderson	Henderson Woolen Mill Co.	Enlarged Mill.
Hopkinsville	Rockee, Garth & Shroder	Tobacco Factory.
Louisville	Excelsior Trunk Top Co.	Trunk Tops.
Louisville	Lithgow Mfg. Co.	Increased Capital Stock.
Louisville	Ruby Carriage Co	Carriage Factory.
Louisville	Ky. State Gas Fuel Co	Natural Gas, &c.
Louisville	New Albany Mining & Milling Co.	Mining, &c.
Louisville	Ewald Iron Co.	Double Rolling Mill.
Louisville	Ky. & Ind. Bridge Co.	Machine Shops.
Louisville	American Litho. Stone Co.	Quarrying, &c.
Louisville	Falls City Varnish Co	Varnish Works.
Madisonville	Conrade Reineke	Coal Mining.
Midway	S. J. Greenbaum	Distillery.
New Liberty	Coats & Richie	Distillery.
Owensboro	A. Rosenfield & Co.	‡Distillery.
Owensboro	American Mining & Milling Co	Mining, &c.
Owensboro	J. C. Terrill & Co.	Improved Flour Mill.
Paducah	Maxom & Robinson	Flour Mill.
Russellville	Carroll & Neely	Flour Mill.
Uniontown	John H. Barrett & Co.	Tobacco Factory.
Vanceburg	— Riley	Quarrying.
Winchester	Conway Lumber Co.	New Saw Mill.
Winchester	King & Co.	Wagon Factory.

LOUISIANA.

Ascension Par.	Duncan F. Kenner	Rice Mill.
Ascension Par.	Saulsbery Sugar Mill	Improved Sugar Mill.
Atchafalaya	Walker & Mercer	Shingle Mill.
Bayo Brulo	Reed & Smith	Canning Factory.
Cora Plantation	A. Meyer	Sugar Mill.
Cypremont	A. Sorrel	Improved Sugar Mill.
Cypremont	J. M. Bureguiere	Improved Sugar Mill.
Cypremont	Calery & Segin	Improved Sugar Mill.
Farmerville	T. T. Elliott	Sugar Machinery.
Lake Charles	Calcasieu Artesian Well Co.	Water Works, &c.
New Orleans	American Fibre & Decorticating Co.	Fibre Manufacture.
New Orleans	Petit & Rob	Wood-working Shop.
New Orleans	Southern Brewing Co.	Additional Brewery.
New Orleans	Lanaux's Rice Mill	Rice Mill.
New Orleans	L. J. Fleury & Co.	†Coffin & Furniture Fac.
New Orleans	La Branch International Fibre Co.	Ramie and Jute.
New Orleans	Franz Lutz Fibre Co.	Ramie and Jute.
New Orleans	Southwestern Brush Electric Light Co	Enlarged Plant.
New Orleans	American Fatty Prodts. Co.	Fertilizers, Soaps, &c.
New Orleans	Lang, Wedemeyer & Co.	Vinegar Factory.
New Orleans	Flower & Commagere	Cigarette Factory.
New Orleans	La. Wire & Iron Mfg. Co.	Iron Fence Factory.
New Orleans	Edison Illuminating Co.	Electric Light Works.
New Orleans	New Orleans Oil & Mfg. Co.	Soap, Oils, &c.
New Orleans	B. Lalland	Cotton Compress.
New Orleans	Orleans Mfg. Co.	Furniture & Coffin Fac.
New Orleans	Hope Rice Mill	Enlarged Mill.
New Orleans	Planters' Crescent Oil Co.	Enlarged Mill.
New Orleans	Jos. Seidel & Bros.	Doubled Furniture Fac.
New Orleans	L. Spotorino	Saw Mill.
New Orleans	Ramon Alones Havana Cigarette Mfg. Co.	Cigarette Factory.
New Orleans	Daniels & Schlieder	Bottling Factory.
Oakland	F. A. Newsom	Grist Mill.
Shreveport	S. R. Bullock & Co.	Water Works.
St. John Parish	Leon Godchaux	Sugar Mill.
St. Mary Pari'h	C. Eustis	Sugar Mill.
	M. Bosworth	Improved Sugar Mill.
	E. J. Gay	Sugar Mill.

MARYLAND.

Location.	Name.	Business.
Aberdeen	M. F. Wright	Improved Flour Mill.
A. Arundel Co.	Thompson & Bro.	Canning Factory.
Baltimore	Monumental Seal Lock Co.	Locks, &c.
Baltimore	Maryland Elec. Motor Co.	Electric Motors.
Baltimore	Helsby & Richards.	Paper Box Factory.
Baltimore	Volina Drug & Chem. Co.	Patent Medicines.
Baltimore	C. A. Gambrill Mfg. Co	†Corn Mill.
Baltimore	Siemens-Lungren Gas Lamp Co.	Lamps.
Baltimore	Jou neymen Butchers' Co-Operative Mfg. Asso.	Sausage Factory, &c.
Baltimore	Margaretha Beck	‡Furniture Factory.
Baltimore	Md. Hom'y & Coralline Co.	Hominy, &c.
Baltimore	F. X. Hooper	†New Machine Shop.
Baltimore	James Robertson & Co	‡Lead Pipe & Shot Fac.
Baltimore	Matthai, Ingram & Co.	Enlarged Tinware Fac'ry.
Baltimore	Baxter Electrical Motor & Mfg. Co	Electrical Works.
Conowingo (nr)	B. G. & J. C. Smith	Flour Mill.
Hagerstown	Antietam Hosiery Mills	Hosiery Mill.
Harford Co.	Peach Bottom Slate Co.	Slate Quarrying.
Stafford	E. M. Allen	Soapstone Quarry.
Union Bridge		Water Works.
Walker's Swi'h	Dan. Cameron	Improved Flour Mill.
Wash ton, D. C.	F. G. Smith	Piano Factory.

MISSISSIPPI.

Allen's Station	Charles B. Allen and others.	Spoke Factory.
Corinth	Corinth Creamery Co.	Creamery.
Durant	Rhyne Paragon Process Tanning Co.	Tannery.
Graball (near)	Chaffe & Powell	Saw Mill.
Greeneville	Planters' Cotton Seed & Crushing Association	Cottonseed Oil Mill.
Holly Springs	Holly Spgs. Cot. Compress.	Cotton Compress.
Meridian	Meridian Phosphate Co	‡Works.
Moss Point	Guinn & Gregory	Plow Factory.
Moss Point	G. W. Robinson	†Improved Saw Mills.
Port Gibson	Port Gibson Cotton Mills	New Machinery.
Yazoo	Yazoo Oil Mill Co	Improved Oil Mill.

NORTH CAROLINA.

Albemarle, near	C. A. Shankle	†Gold Mining.
Asheville	Jenny Electric Light Co.	Electric Light Works.
Bowie's Creek	Wm. Johnston	Saw and Corn Mill.
Casar	Warlick Bros. & Ivester	Shingle Mill.
Casar (near)	Jos. Carpenter & Lackey	Flour and Corn Mill.
Charlotte (near)	St. Catherine Gold Min. Co.	Mining.
Charlotte	E. M. Andrews	Mattress Factory.
Charlotte (near)	G. T. Raymond	Gold Mining.
Cleveland Co.	J. P. Pasour	Distillery.
Concord	Huff & Warner	Shuttle block Factory.
Durham	Strauss & Raab	Tobacco Factory.
Durham	J. L. Lockhart	Tobacco Factory.
Durham	Lewis Blount	†New Mach. Shop & Fdy.
Durham	W. T. Blackwell	Saw Mill.
Fayetteville	Causey & Robbins	†Refitted Cotton Mill.
Fayetteville	Thomas Ward	Plow Factory & Foundy.
Fayetteville	Beaver Creek & Bluff Mills Mfg. Co.	†Cotton Machinery.
Forest City	Forest City Mfg. Co.	Planing Mill.
Forest City	Moore & Thomas	Wood-working Factory.
Francisco	R. W. George	Saw and Grist Mill.
Gibsonville	Ossipee Cotton Factory	Additional Machinery.
Gibsonville	B. & J. A. Davidson	Cotton Mill.
Goldsboro	Goldsboro Oil Mills	†Oil Refinery.
Goldsboro	R. E. Jones	‡Corn and Flour Mill.
Greensboro	J. H. Gilmer & Co.	Tobacco Factory.
Greensboro	W. E. Bevill & Co.	Tobacco Factory.
Greensboro	Charles E. Strober	‡Handle Factory.
Greenville	Sugg & Ormond	Wood-working Factory.
Grover	Hamright & Ramsay	Distillery.
Henderson	G. W. Smith & Co	Tobacco Factory.
Jug Town	Monroe Ritchey	Jug Factory.
Jug Town	Robert P. Speagle	Jug Factory.
Julian	Snow & Cox	Shuttle-block & Spoke Fac.
Lexington	Gaskill & Holmes	Tobacco Factory.
Morganton	Wilson & Reid	Enlarged Furniture Fac.
Onslow County	Mr. Terry	Saw and Grist Mill.
Oxford	Cooper Tobacco Co	Tobacco Factory.
Oxford	Standard Gold Mining Co	Mining.
Pittsboro	Moore, Lasater & Bland	Saw Mill.
Pittsboro	Snow & Cox	Shuttle-block & Spoke Fac.
Pittsboro	J. M. Odell and others	Refitted Cotton Mill.
Raleigh	North Carolina Phos. Co	Enlarged Works.
Raleigh	Raleigh Compress Co.	Cotton Compress.
Rutherfordton	R. W. Logan	Brick Yard.
Salisbury	Moffett, Hodgkins & Clark.	Water Works.
Salisbury	J. D. Smalls & Bros	†Box Factory.
Salisbury	J. D. Gaskill	Tobacco Factory.
Salisbury	J. D. Smalls & Bros	Iron and Brass Foundry.
Shelby	Humphries & Co.	Tobacco Factory.
Shelby	— Leak	Tobacco Factory.
Wilmington	Creosote Lum. & Cons. Co.	Creosoting Works.
Wilmington	Fore & Foster Planing Mill, Sash & Blind Co.	Planing Mill, &c.

SOUTH CAROLINA.

Charleston	Standard Mfg. Co.	†Cooper Shop.
Charleston	C. J. Schlepegrell & Son	Saw and Planing Mill.
Charleston	Charleston Elec. Light Co.	Electric Light Works.
Charleston	J. L. Sheppard and others	Rice Mill.
Charlotte	C. A. Chisolm	Repaired Rice Mill.
Columbia	W. G. & L. D. Childs	Mill.
Columbia	C. C. Habernecht	‡Ice Factory.
Cummings	N. E. H. Dopson & Co.	‡Saw Mill.
Johnston	H. S. Creed	‡Mill.
Mayesville	S. M. Graham	Grist Mill.
Spartanburg	Tanner & Lemaster	Sash and Door Factory.
Spartanburg	Armstrong & Co.	Furniture Factory.

TENNESSEE.

Alberton	T. A. & J. L. Hare	Improved Flour Mill.
Bristol	J. L. Ludwig & Smith	†Enlarged Foundry.
Centerville	Centerville Peanut Recleaning Co.	Peanut Recleaning Fac.
Chattanooga	Abrams Creek Roofing Slate Co.	Slate Quarrying.
Chattanooga	Park Place Mfg. Co.	Planing Mill, &c.
Chattanooga	Aetna Coal & Coke Co.	New Mine, &c.
Clarksville	Clarksville Electric Lgt. Co.	Electric Light Works.
Columbia	Columbia Water Co	Enlarged Plant.
Coopertown	F. J. Ellis	Saw Mill & Im. Flour Mill.
County Line	M. M. Green	Saw Mill.
Darwin Station	Darwin Coal Co.	Coal Mining, &c.
Dayton	Dayton Coal & Iron Co.	New Coal Mine.
Dayton	Wm. Slawson	Wagon & Carriage Fac.
Erin	Erin Lumber & Mfg. Co.	Enlarged Mill.
Greenfield	Tenn. Box & Basket Fac.	Box and Basket Factory.
Hartsville	H. Fitzpatrick	†Flour Mill.
Houkville	H. L. Penery	Saw Mill.
Knoxville	E. R. Chapman and others	Mining, &c.
Knoxville	Knoxville Ice Co.	Doubled Ice Factory.
Knoxville	J. C. Kinzel	Cement Factory.
Knoxville	Jellico & Cumberland Gap Coal, Iron & R. R. Co.	Mining, &c.
Knoxville	Tuckaleechee Timber & Boom Co.	Lumbering.
Knoxville	Knoxville Boom Co	Lumbering.
Knoxville	James Anderson	Spice Mill.
Knoxville	Scottish Carolina Timber & Land Co.	†Saw Mill.
Knoxville, near	Crescent Marble Co	Marble Quarrying.
Knoxville	Knoxville Brewing Asso.	Brewery, &c.
McMinnville	D. F. Valentine	Broom Factory.
Memphis	National Cotton Seed & Huller Co	Cottonseed Hullers.
Memphis	Henning & Hannah	Saw Mill.
Memphis	Memphis Cider & Vingr. Co.	Vinegar Factory.
Memphis	H. Wetter Mfg. Co.	Stoves and Tinware.
Nashville	Pendleton Drug Co.	Drugs, &c.
Nashville	Nashville Ice Co.	Double Ice Factory.
Nashville	Walton & Nashville Co-operative Coal & Mfg. Co.	Hosiery Factory, &c.
Nashville	Southern Horse Collar Coupling Co.	Horse Collars, &c.
Nashville	Nashville Iron Co.	Rolling Mill.
Oliver Springs	Wm. Rennie	Saw Mill.
Pulaski	Pulaski Gas Co	‡Gas Works.
Robbins	Robbins Coal & Mining Co.	Coal Mining.
Sawdust Valley	Mayberry Bros.	Grist Mill.
Sharp's Corner	Nelson & Preston	Saw Mill.
South Pittsburg	Tenn. Coal, Iron & R. R. Co.	Add. Coke Ovens & Min.
S. Pittsburg, nr.	J. C. Wall and others	Coal Mining.
Springfield	Springfield Mill Co.	Flour Mill.
Sweetwater	A. J. Stradley	Saw Mill.
Weaver's Store	J. H. Francis	Improved Flour Mill.
White Fern	White Fern Mill Co.	Planing Mill.
White Rock	Penn Lumber Co	Saw Mill.
Williamson Co.	G. E. Bennie & Co.	†Bucket Factory.

TEXAS.

Austin	Phœnix Cigar Co.	Cigar Factory.
Ballinger	Ballinger Water Wks. Co.	Water Works.
Brenham	Brenham Oil Mill	Enlarged Oil Mill.
Carroll	Nona Mills Co	Enlarged Saw Mill.
Corsicana	Texas Lumber Co.	Lumber Mill.
Corsicana	Texas Development Co.	Compress, &c.
Corsicana	F. S. Brooks & Co.	Machine Shop.
Cuero	Birchel Milling Co.	‡Mill.
Dallas	Eagle Corn Mills	Corn Mill.
Denison	Denison Electric Light & Power Co	†Enlarged Plant.
Denton	Denton Ice Co	Ice Factory.
El Paso	El Paso Gas Lt. & Heat Co.	Gas, &c.
Forest	L. & H. Blum	‡Mill.
Fort Worth	Eagle Mche. & Boil. Works.	Machine Shop.
Honey Grove	Honey Grove Compress Co.	Cotton Compress.
Houston	Howard Oil Co	‡Oil Mill.
Houston	Harris County Mills	Milling.
Jefferson	Jefferson Coal & Mining Co.	Mining.
Jefferson	Jefferson Cotton Factory	Rope and Twine Factory.
Marshall	Marshall Gas & Water Supply Co.	Gas Works.
Marshall	Marshall Car Wheel & Foundry Co.	†Brass Foundry.
Marshall (near)	J. H. Johnson	Canning Factory.
Montague	C. C. Frost & Co.	‡Mill.
Paris	Elliott & Son	Ice Factory.
San Diego	Darkman & Glover	Grist Mill.
Schulenberg	Schulenberg Compress Co.	Cotton Compress
Sherman	Sherman Ice Co.	†New Ice Factory.
Sherman	Mayor & City Council	Water Works.
Taylor	Taylor Lumber Co.	Lumber Mill.
Terrell	Llyod & Bivins	Flour Mill.
Texarkana	Bowie Lumber Co.	Saw and Planing Mill.
Trinity (near)	Anderson, Cameron & Co.	Saw Mill.

VIRGINIA.

Andersonville	R. M. Anderson	‡Saw and Grist Mill.
Bowling Green	J. L. Jordan	‡Saw Mill.
Broad Run Bridge	Kingsley Bros	Creamery.
Bridgewater	Strickler Bros	†Furniture Factory.
Bridgewater	Sanger Bros	Creamery.
Charlottesville	Fred. M. Wills	Improved Flour Mill.
Claremont	A. L. Drake	Sugar Mill.
Danville	W. W. Worsham	‡Box Factory.
Danville	Heidelbuck Bros.	‡Box & Furniture Factory.
Danville	Electric Light Works	Works.
Delaplane	E. D. Kincheloe	Flour Mill.
Eanes X Roads	J. J. Dixon	Improved Flour Mill.
Hamilton	Thomas & Boteler	Machine Shop.
Harrisonburg	E. W. Sullivan	Box Factory.
Lexington	E. A. Johnson	Quarry.
Lexington	R. H. Coleman	Foundry & Machine Shop.
Lynchburg	Lone Jack Cigarette Co	†New Factory.
Manchester	Old Dominion Mfg. Co.	Improved Cotton Mill.
Manchester	A. D. Shotwell & Co.	‡Tannery.
Motley's Depot	Berry & Lilliard	‡Saw Mill.
Norfolk County	Norfolk Co. Lumber Co	Lumber Mills, &c.
Pocahontas, (near.)	Southwest Virginia Improvement Co.	New Coal Mine.
Rectortown	Milan Mills	Flour Mill.
Richmond	Old Dominion Iron & Nail Works Co.	†Bessemer Steel Plant.
Richmond	Amer. Animal Tether Co.	Animal Tethers.
Roanoke	Big Lick Gold & Silver Mining Co	Mining.
Rural Retreat	B. F. Neff	Improved Flour Mill.
Snowville	J. H. Grayson	†Improved Flour Mill.
Staunton	Reeves Catt	†Fertilizer Factory.
Staunton	Parkins, Jordan & Parkins	Creamery.
Staunton	Thompson: Houston Electric Light Co	Electric Light Works.
Staunton	Augusta Agricultural Works.	Foundry & Machine Shop.
Tobacco	Richmond Tobacco Co.	Tobacco Factory.
Warrenton	Kingley Bros	Creamery.
Waynesboro, nr.	J. B. White & Co.	Manganese Mining.
Waynesboro	Wright & Grattan	Creamery.
West Point	Wt. Point Hosiery Mill Co	Hosiery Mill.

WEST VIRGINIA.

Alderson	J. C. Bright	Improved Flour Mill.
Alderson	Alderson Lumber Co.	Lumber Mill.
Beechwood	Beechwood Coal & Coke Co.	Coal and Coke.
Charleston	Hanna & Nye Mfg. Co	Tin and Iron Works.
Coopers	Mill Creek Coal & Coke Co.	†New Mine & Coke Ovens.
Crescent	W. R. Johnson	Coke Ovens.
Davis	I. L. Rumbarger Lumber Co.	†Saw Mill.
Davis	Fayerweather & Ladew	Tannery.
Dobbin	J. L. Rumbarger Lumber Co.	Rebuilt Lumber Mill.
Fairmont	Atlantic Roller Mills	Flour Mill.
Huntington	C. L. Lallance	Distillery.
Lazearville	Lazear Glass Co.	Glass Factory.
Lewisburg	Greenbrier Creamery Co.	Creamery.
Mohlers	N. B. Shepherd	Brick-yard.
Parkersburg	Ohio Valley Railroad Co.	Machine Shops.
Piedmont	Beaver Boom Co.	Lumbering.
Ripley Landing	Mill Creek Boom & Lum. Co.	Lumbering.
Wellsburg	Riverside Glass Works	‡Glass Works.
West Virginia	Empire Axle Mfg. Co.	Axles, &c.
Wheeling	Natural Gas Illum. Co.	Natural Gas
Wheeling	La Belle Iron Works	Improved Iron Works.
Williamsburgh	Joseph Griffee	Saw Mill.

‡Rebuilt or being rebuilt after being burned.

†Companies or firms in existence prior to July 1, but since that time have either enlarged their works or built new works, or increased capital. In many of these cases given in this list, reference is made to entirely new works built by old firms.

"WE need more railroad facilities in Pennsylvania. The main lines at present have all of the traffic they can handle, and to-day neither the Pennsylvania or the Baltimore & Ohio Roads have sufficient rolling stock. The Pennsylvania Road has just placed orders for 2,000 additional freight cars. Of these, 400 will be constructed at their Altoona shops, 200 cars will be built by the Berwick Company, 200 by Allison, of Philadelphia; 200 by the Carlisle works and 200 by Pardee & Co., of Watsontown. The balance will be built by other concerns in the State. The Baltimore & Ohio Road is just in the same category with regard to rolling stock. They have placed orders for 1,000 cars with the car works at Milton, Pa., and, if I remember rightly, your Pittsburgh & Western have ordered 2,000 freight cars. This impetus in railway equipment is not confined to the Pennsylvania district; it is general all over the country. That is one of the substantial reasons for the recent advance in iron."—Interview in Pittsburgh Dispatch.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

ALABAMA.

The Birmingham Chain Works, Birmingham, Ala., B. F. Roden, president, have increased their capital stock to $30,000, and will enlarge their works.

The Phœnix Bridge & Iron Co., New York, have received the contract to build the iron bridge across the Tombigbee river in Alabama, previously reported, for the Mobile & West Alabama Railroad.

T. D. Farrow is developing gold lands near Dadeville, Ala., and will erect a four-stamp mill.

J. Bradford has started a factory at Mobile, Ala., for preserving okra.

It is rumored that the Sloss Furnace Co., Birmingham, Ala., contemplate establishing steel works.

It is reported that a tannery and shoe factory are to be started at or near Birmingham, Ala.

$30,000 has been subscribed towards building a 2-mile street railroad from Tuscumbia to Sheffield, Ala. A. J. Moses, Sheffield, can give particulars.

The Alabama & Tennessee Railroad Co., capital stock $500,000, has been organized at Florence, Ala., with W. B. Wood as president; C. G. Smith, vice-president, and H. C. Wood, secretary.

The Mobile Real Estate Co. will erect a 3-story brick and iron building at Sheffield, Ala.

The Bessemer Land Co., capital $600,000, has been incorporated by H. F. de Bardeleben and Andrew W. Adger, of Birmingham, Ala., and Daniel Roberts, Moses E. Lopez and Augustus T. Smythe, of Charleston, S. C.

ARKANSAS.

M. J. Tucker, Pollard, Ark., has improved his flour mill and put in some new machinery.

The Rogers Milling Co., Rogers, Ark., are erecting a 75-barrel roller flour mill.

Texarkana, Ark., previously reported as issuing bonds to build water works, has contracted with the Texarkana Water Co. to build the works. The Holly system will be used.

FLORIDA.

Howland & Withrow, reported last week as to refit the Brash saw mill at Apalachicola, Fla., with new machinery, will probably build a new saw mill with a planing mill and shingle mill attached.

It is stated that Henry M. Flagler will erect a $25,000 church building at St. Augustine, Fla.

The recent report that a hotel would be erected at Okahumpka, Ga., should be at Okahumpka, Fla.

James A. Waddell, reported last week as building a cigar factory at Key West, Fla., is erecting two factories, 40x100 feet each, and one 40x140 feet, all three stories.

A. Demens & Co., reported last week as to move their saw mill and sash factory from Longwood to Oakland, Fla., are erecting car shops at Oakland.

The capacity of the Florida Chemical Works, Jacksonville, Fla., will be enlarged.

The Palatka Gas Co., Palatka, Fla., are putting in considerable new machinery to enlarge their works to more than double their present capacity.

V. Martinez Ybor & Co. contemplate building a system of water works at Ybor City, near Tampa, Fla.

A. A. Parker, Huntingdon, Pa., has received the contract to build water works at Eustis, Fla., reported last week as having been let. He has also contracted to build water works at Orlando, Fla. His address at present is Eustis.

A fertilizer factory is being built at Gainesville, Fla.

The Orlando, Lake Jessup & Atlantic Railroad Co., reported last week as incorporated at Orlando, Fla., has been organized with Nat. Poyntz as president, and T. J. Shine, secretary and treasurer.

GEORGIA.

The Columbus Ice & Refrigerating Co., Columbus, Ga., will put an additional 10-ton ice machine in their factory.

The Muscogee Manufacturing Co., Columbus, Ga., have recently improved their cotton mills and put in new machinery.

The capacity of the cotton mills of the Clegg Manufacturing Co., Columbus, Ga., will probably be doubled.

It is stated that Barta & White, Atlanta, Ga., will build gas and water works at Marietta.

J. H. Estill, Savannah, Ga., will receive bids until November 15 for building a large 6-story brick hotel, 93x212 feet.

George W. Woodruff, Columbus, Ga., contemplates putting several new boilers in his Empire Flouring Mills.

A sash and door factory is projected at Millen, Ga.

The West End & East Point Railway Co. will be chartered in Georgia by O. I. Culberson, R. H. Caldwell, G. H. Culberson and Lewis Cook.

James Shackelford is opening and will develop a gold mine at Flowery Branch, Ga.

Work has been commenced on the street railroad at Dublin, Ga., previously reported to be built by J. M. Smith and others.

Sickles & Taylor have recently purchased some new machinery for their marble quarries near Tate, Ga.

A company is being organized to develop marble quurries at Tate, Ga.

Taber Bros. have lately started a well-bucket factory at Atlanta, Ga., and will soon double their capacity.

KENTUCKY.

The Eclipse Hay Press Co., capital stock $25,000, has been incorporated at Newport, Ky., by J. K. Stone, R. W. Nelson, George W. Dunn, L. N. Rouse and B. M. Herndon.

Mr. Hermann, Ashland, Ky., will enlarge his furniture factory.

H. C. Potts and W. M. Potts have started a flour mill at Nicholasville, Ky.

Myers Bros. have erected a 75-barrel roller flour mill at Princeton, Ky.

It is stated that William Duffy, Higginsport, O., will build a large flour mill at Augusta, Ky.

MARYLAND.

The Toulmin Cotton Gin Co., capital stock $1,500,000, has been incorporated at Baltimore, by Morton Toulmin, John B. Toulmin and George F. Brott, of Maryland, and James B. Edmunds and Van H. Manning, of Washington, D. C.

William H. Waters is putting some new machinery in his flour mill at Belair, Md.

L. Winard & Co. have started a distillery at Scott's Level, Md.

The Union Bridge Water Co., Union Bridge, Md., will soon build a reservoir.

The Baltimore Short Line Railroad Co. will build a depot and engine house and machine shop at Annapolis, Md. H. P. Underhill, 6 South street, Baltimore, is president.

The Delaware Electric Light & Power Manufacturing Co., Wilmington, Del., will erect an electric light plant at Salisbury, Md.

MISSISSIPPI.

A creamery is being erected at Hernando, Miss.

The East Mississippi Machine & Foundry Works, capital stock $50,000, has been incorporated at Meridian, Miss., by S. S. Williams, D. D. Briggs, J. S. Solomon, C. W. Robinson and others, to enlarge and operate the foundry and machine shop of William & Briggs.

S. B. Rick, Sandersville, Miss., will rebuild his turpentine distillery, reported last week as burned.

H. O. Rand, James B. Wathall, T. J. Malone, J. C. Clark and others will incorporate a stock company to erect the cotton compress at Holly Springs, Miss., previously reported. The machinery has been ordered.

NORTH CAROLINA.

A company will probably be organized at Goldsboro, N. C., to build water works and erect gas works and an electric light plant.

Culp & Co., Harrisburg, N. C., are putting in a new gin at their saw mill.

Morris & Harrison are erecting a 100 horse-power saw mill on Smith's creek, in Pamlico county, N. C.

William H. Jacobs contemplates erecting a saw mill on the Neuse river, in Pamlico county, N. C.

The Odell Manufacturing Co., Concord, N. C., are building a 2-story weaving mill, and will put in 154 looms.

A. Y. Sigmon, Hickory, N. C., is improving his mills, and will erect a grain elevator.

SOUTH CAROLINA.

The Charlotte, Columbia & Augusta Railroad Co. (office Columbia, S. C.) will build two new iron bridges—one at Columbia and the other near Rock Hill.

TENNESSEE.

H. C. Jackson has received the contract to build the Episcopal Church at Chattanooga, Tenn., previously reported. It will cost about $50,000.

A stock company with a capital of $50,000 has been formed at South Pittsburgh, Tenn., to build pipe works. G. E. Downing will be manager. A company is being organized to erect a large building and supply it with steam power for manufacturing enterprises. Negotiations are being made for the establishment of a roller mill and several factories. Gas works are reported to be built.

It is stated that William M. Duncan, of Nashville, Tenn., and associates, who recently purchased several thousand acres of land at South Pittsburgh, including that place, have formed the South Pittsburgh City Co., capital stock $3,000,000, to develop their property.

It is stated that J. R. Smith & Co., Lynchburg, Va., will move their cigar factory to Knoxville, Tenn.

The name of the company lately reported to be organized at Chattanooga, Tenn., to develop slate quarries in Blount county, is the Abram's Creek Roofing Slate Co. The capital stock is $100,000.

The Sweetwater Mills Co., Sweetwater, Tenn., will put additional machinery in their flour mill.

The Main Street & Lischey Avenue Street Railway Co. has been chartered at Nashville, Tenn., by T. W. Crutcher, Joseph H. Thompson, M. A. Spurt, E. R. Richardson, H. W. Buttorff and others.

I. C. Conkling, Windfall, Ind., contemplates erecting a saw mill at Bristol, Tenn., but has not yet fully decided.

Thomas A. Cruse, Morgantown, Tenn., has purchased machinery for a corn mill.

A company is being organized at Knoxville, Tenn., to start an iron foundry.

The Foster Street M. E. Church, Nashville, Tenn., will erect an $8,000 edifice.

TEXAS.

Michael Riley, R. C. Gannon, James J. Gannon and John Gannon have incorporated at Dallas, Texas, the Dallas Brewing Co., capital stock $100,000.

The Crystal Palace Roller Mill Co., Weatherford, Texas, have put in a new 125-horse-power engine.

Davidson & Son are erecting a flouring mill at Jonah, Texas. The capacity will be 50 barrels per day.

A stock company is being organized at Fort Worth, Texas, to manufacture refrigerators. The capital will probably be $10,000.

R. D. Wood & Co., Philadelphia, Pa., have contracted to build the water works at Brownwood, Texas, previously reported.

VIRGINIA.

A new pump is being erected at the water works at Norfolk, Va.

J. P. Houck will double the capacity of his tannery at Harrisonburg, Va.

C. B. Beale, Norfolk, Va., wants to purchase brick machinery, and desires catalogues and price-lists.

Adams, Chambers & Co. are building an addition to their leaf tobacco factory at Lynchburg.

The Crozier Iron & Steel Co., Roanoke, Va., have purchased about 800 acres of iron ore lands in Wythe county, for development. They will increase the output of the Rich Hill iron ore mines, previously reported, from 125 to 200 tons per day.

WEST VIRGINIA.

The Mercantile and Manufacturing Co. has been incorporated at Hampton, W. Va., by William Garten, S. W. Clark, Foster Keeney, A. C. Blair and B. G. Keeney. The object of the Company is to do a general manufacturing and repairing business, The capital stock is not to exceed $25,000.

Doyle & Co., Huntington, W. Va., will build a new machine shop.

J. H. B. Davenport and others have made a proposition to build water works at Huntington, W. Va.

Gwinn Bros., Glenwood, W. Va., will refit their flour mill with roller machinery.

BURNED.

The mill of John T. Howard, near Quincy, Fla.

The saw and planing mill of George F. Sloan & Bros., Baltimore; loss $10,000.

The saw mill of Raspberry & Williams, Clover Orchard, N. C.; loss $1,500.

LOCKWOOD, GREENE & CO.

MILL ENGINEERS

Office, 65 Westminster St., Providence, R. I.,

Carefully prepared plans, specifications and estimates furnished for the construction, equipment and organization of new mills and the revision and improvement of old.

Clarks Bros.' planing mill at Washington, D. C.; loss $15,000.

The steam mill of W. H. White, ten miles from Monticello, Ark.; loss $2,500.

The grist and lumber mill of Hicks & Bridges, Mooresboro, N. C.; loss $1,000.

The saw mill of B. H. Brenneman, near Easton, Md.

The gins of Frank E. McKenzie, Grove Station, S. C.; S. R. McFarlin, near La Grange, Ga.; W. T. Lazenby, Newman, Ga.; J. E. Wannamaker, near St. Matthew's, S. C.; J. W. Torbett, Society Hill, Ala.; J. U. Ray, Woodstock, Ala.; John Adams, near Salem, Ga.; A. J. Harrison, Hampton, S. C.; James D. Smith, near Box Spring, Ga., and George Ward, Leota, Miss., have been burned.

The Diamond Axle Grease Factory, Louisville, Ky., owned by the Chess-Carley Co.; loss $3,000.

The gin and mill of John P. Haywood, in Wake county, N. C.

The ginnery of C. E. Satterthwait, Montmorenci, S. C.; loss $4,000.

The saw mill of John R. Espy & Bro., 2 miles from Gordon, Ala.; loss $4,000.

The carriage factory of Schaff Bros., Hagerstown, Md.

The stave and box factory of Sprague & Carson, Old Fort, N. C.

The saw mill of Mr. Baird, near Hague, Fla.

The ginnery of C. F. Stewart, White Oak, Ala.; loss $5,000.

Will Build Street Railroad.

SHEFFIELD, ALA., Oct. 10, 1886.
Editor Manufacturers' Record:

A subscription list has been opened and $30,000 subscribed for building a street railroad to connect Sheffield with Tuscumbia. An organization will be effected in a few days and the enterprise put through as rapidly as material can be obtained.

A. J. MOSES.

Roller Flour Mill.

PRINCETON, KY., Oct. 10, 1886.
Editor Manufacturers' Record:

We have built a complete roller mill of one hundred barrels capacity.

W. J. MYERS & BRO.

Enlarging Factory.

LYNCHBURG, VA., Oct. 11, 1886.
Editor Manufacturers' Record:

We are making an addition to our leaf and strip tobacco factory, 50x50 feet, 4 stories high. This improvement will give us a handling capacity of six million pounds tobacco per annum. Increasing business forced us to make the improvement.

ADAMS, CHAMBERS & CO.

FORT WORTH, TEX., Oct. 5, 1886.
Editor Manufacturers' Record:

The report of the incorporation of the Dania Pure Butter Churnery Co. is correct, and the object of our company is to place upon the market pure butter. S. L. DANIA.

To Build a New Town.

BIRMINGHAM, ALA., Oct. 6, 1886.
Editor Manufacturers' Record:

The North Birmingham Land Co. was organized October 1, 1886. The capital stock is $700,500; all taken. Lands owned: 1,341 acres on the waters of Village and Five Mile creeks, the Georgia Pacific Railway and the Elyton Land Co's Belt Railroad, 1¼ to 3 miles from the city of Birmingham, Ala. Object: to lay out and build a city to be called North Birmingham. The president is Jno. W. Johnston; secretary and treasurer, Walter N. Johnston.

JNO. W. JOHNSTON.

Water Works for Several Florida Cities.

HUNTINGDON, PA., Oct. 7, 1886.
Editor Manufacturers' Record:

I am about to erect water works at Eustis, Orlando and Deland, Florida. The works contemplate both direct pumping and stand pipes, and will be of the highest grade. Water is taken from clear water lakes near town in each case, and will be supplied through mains based upon the future needs of the places. The service will be ample for fire protection, domestic, sanitary, manufacturing and irrigating purposes, special attention being given to supplying water for irrigation, which will be measured by meters and furnished at the rate of 35 cents per 1,000 gallons. It is expected that such towns as have a complete system of water works will secure a largely increased immigration. Garden crops are a failure in Florida where there is not sufficient water ready for immediate use in case of a dry spell. The headquarters of all the work will be at Eustis. I would like to hear from any manufacturers of filters. The water is perfectly clear, but it will be necessary to purify it by removing all vegetable and animal matter as far as possible.

A. A. PARKER.

SHEFFIELD, ALA., Oct. 11, 1886.
Editor Manufacturers' Record:

The Mobile Real Estate Co. have material on the ground for the erection of a 3-story brick and iron building, 50x80 feet, adjoining their 2-story structure, corner of Raleigh avenue and First street. It will be used for stores, offices and as a public hall.

M. A. J.

Water Works to be Erected.

PHILADELPAIA, PA., Oct. 12, 1886.
Editor Manufacturers' Record:

We have taken contract to build water works for city of Brownwood, Texas. System—pumping to stand pipe (100x20 feet), 37 fire hydrants of Matthews improved type. The pumping capacity will be about 1.800,000 gallons in 24 hours. We expect to erect them early in 1887. R. D. WOOD & CO.

Building Weaving Mill.

CONCORD, N. C., Oct. 5, 1886.
Editor Manufacturers' Record:

We are building up between our mills Nos. 1 and 2, a mill 68x62 feet—2 stories. This will be a weaving mill, with a floor space for 154 looms, which will be put in as soon as building is completed.

ODELL MANUFACTURING CO.
W. R. ODELL.

Refitting Flour Mill.

GLENWOOD, MD., Oct. 9, 1886.
Editor Manufacturers' Record:

We are remodeling our flour mill and putting in rolls. Messrs. Nordyke, Marmon & Co., of Indianapolis, Ind., are furnishing the machinery. GWINN BROS.

Building New Hominy and Corn Mill.

WILMINGTON, N. C., Oct. 6, 1886.
Editor Manufacturers' Record:

I am putting up my building and will put in hominy and corn meal machinery about December 1st; capacity about 1,000 bushels per day. I hope to be ready February 1st.

G. J. BONEY.

Building Leaf Tobacco Factory.

HENDERSON, N. C., Oct. 6, 1886.
Editor Manufacturers' Record:

We are building a tobacco factory at this point, to be used for handling leaf tobacco for the present; capacity about 1,000,000 pounds. G. W. SMITH.

Developing Gold Mine.

FLOWERY BRANCH, GA., Oct. 6, 1886.
Editor Manufacturers' Record:

I am opening and developing a gold mine, and have already gone sufficiently far to known that it is very rich. The ore is sand quartz, very friable and easily crushed. The dirt and debris about the vein will pan somewhere from 200 to 1,000 particles to the panful. The beaten ore a great deal more. The gold is very fine (dust). On the property is another vein not so fully developed, but apparently equally rich. The placer or deposit diggings are extensive and rich. In the neighborhood of the veins the surface pans finely. On the property there is a lead or bed of Ita columnite or elastic sandstone, also a fine mica mine (undeveloped). The water is abundant and easily controlled. Take it altogether I think it is the best mining property I ever saw.

JAMES SHACKELFORD.

FAYETTEVILLE, N. C., Oct. 11, 1886.
Editor Manufacturers' Record:

The Fayetteville Tobacco Warehouse Company will open a warehouse on the 27th inst. for sale of leaf tobacco. It is more than probable that the same company will manufacture tobacco, if it be found practicable. The culture of tobacco is just introduced in this section, and the results, so far, are reported as encouraging. We wish first to make a market for the sale of the leaf, and hope that manufacturing will soon follow. N. W. RAY.

To Erect Soap Factory.

BIRMINGHAM, ALA., Oct. 4, 1886.
Editor Manufacturers' Record:

We have chartered the Birmingham Soap Works, $50,000 capital stock. Will erect a factory. The officers are: D. M. Drannen, president; C. H. Francis, vice-president, W. N. Malone, secretary and treasurer.

C. H. FRANCIS.

Will Build Large Flour Mill.

Editor Manufacturers' Record:

AUGUSTA, KY., Oct. 4, 1886.

Mr. Wm. Duffy, a prominent citizen and owner of a flour mill at Higginsport, O., will erect the largest flour mill in this section as soon as the M. & B. S. R. R. is completed, which, I think, will be about the 1st of June, 1887. He has already purchased the property. W. P. CAMPBELL.

Large Iron Ore Mines.

ST. JOSEPHS, TENN., Oct. 8, 1886.
Editor Manufacturers' Record:

This company commenced shipping from its ore bank No. 1 to-day, the extension of the Nashville & Florence R. R. being completed. A brown hematite of superior quality is produced at this bank. The facilities and appliances for mining and washing are of the most improved type, having a capacity of one thousand tons per day of washed ore, —makes it the largest producer in the South, if not on the continent, of this class of ores. The liberal policy of the L. & N. R. R. Co. will enable these ores to reach many points in the North that heretofore have had no opportunity of procuring brown hematites from the middle Tennessee iron belt. As the demand increases the production will meet it to any extent, as the supply is practically unlimited. SHOAL CREEK IRON CO.

Information Wanted.

SCOTTSBORO, ALA., Oct. 11, 1886.
Editor Manufacturers' Record:

Can you put me in communication with large tannery or dealer in tan bark; also dealer in hardwood lumber, such as oak, gum, ash, hickory, beech, sycamore, etc. Any favors in this line will be appreciated, as I am engaging in the timber and lumber business. JOHN SNODGRASS.

Developing Copper Mines.

BUFFALO LITHIA SPRINGS, VA., Oct. 11, '86.
Editor Manufacturers' Record:

The injunction obtained August last by Col. Thos. F. Goode, owner of Buffalo Lithia Springs, versus the Buffalo Lithia Springs Co., lessees, was dissolved a few days ago by the Federal Court at Richmond, and the company will be put in possession of property again the 14th inst.

Engineers are at work locating the Durham, Blue Wing & Clarksville R. R., running from Clarksville, Va., to Durham, N. C., a distance of 60 miles. Twenty-two miles are located and grading commenced. It passes through the finest tobacco counties of Virginia and North Carolina, which are exceedingly rich in minerals, traversing the rich Blue Wing copper belt for a distance of 20 miles. There are now three companies working these mines. A smelter of 60 tons capacity per day has been procured and is to be put up at an early day. As soon as the railroad is completed to mines, doubtless many more companies will be organized for working them. Twenty-three veins have been uncovered, sufficient to show there are many millions of tons. One shaft of 85 feet was sunk, and on a shipment of 12 tons ore, 8,700 pounds metal were produced, about 35 per cent. pure. The quartz carries from $5 to $30 of silver per ton, sufficient to pay working expenses. We predict that when the D., B. W. & C. R. R. is completed it will be the best paying road in the State. B.

Brick Machinery Wanted.

NORFOLK, VA., Oct. 8, 1886.
Editor Manufacturers' Record:

I have a superior quality of clay, and am anxious to put up the best brick machine I can get. I want to make face and ornamental, as well as common, brick. You will confer a favor by getting manufacturers of improved brick machinery to furnish me with circulars and price lists.

C. B. BEALE.

Will Double Capacity.

MERIDIAN, MISS., Oct. 9, 1886.
Editor Manufacturers' Record:

We are merging our present plant into a stock company of $50,000 subscribed capital, exclusive of our plant. We will start to work under the new name November 1st. Will double our capacity in building, machinery, material and practical workmen. Trade in this section is good.

WILLIAMS & BRIGGS.

Will Develop Stone Quarry.

ROME, GA., Oct. 7, 1886.
Editor Manufacturers' Record:

Jno. Bogenshatt has opened a valuable rock quarry near Rome, mainly to procure stone for the masonry of the 2 iron bridges now to be erected at Rome; but the working of the quarry will be continued indefinitely. The 2 bridges will be 1 span each —one of 260 feet clean span and one of 300 feet clean span. They will be the longest and finest highway spans in the South. Morse Bridge Co., of Youngstown, Ohio, contractors for iron work; Jno. Bogenshatt, contractor for masonry.

H. M. SMITH, C. E.

Erecting Three Cigar Factories.

KEY WEST, FLA., Oct. 6, 1886.
Editor Manufacturers' Record:

We have now in course of erection two cigar factories 40x100 feet each, and another 40x140 feet; all to be three stories high. There never has been so much demand for factories as now, the climate of Key West having been proved far superior to any other in this county for the manufacture of cigars.

JAS. A. WADDELL.

Settlers' Convention in North Carolina.

[Special correspondence MANUFACTURERS' RECORD.]

RALEIGH, N. C., Oct. 9, 1886.

The public interest in both this city and the State is about equally divided between the elections to take place the first Tuesday of next month, and the local and State agricultural fairs, and the convention of Northern settlers and visitors that will occur simultaneously with the last.

The MANUFACTURERS' RECORD has, editorially and otherwise, noticed the last two of these coming events several times since the convention was called, but it may not be amiss to renew the subject in this letter, and to give a brief account of the causes that have led up to this movement.

In 1878 quite a number of citizens of Charlotte who had settled there before or after the civil war, actuated by motives alike wise and patriotic, called together in that city a conference of men of like situation with themselves from the several Southern States. They had a two-fold purpose—first, to do away with the popular Northern impression that no person from that section could come South and enjoy the same personal and political rights he did at home; second, to make such statements as their observations and experiences would justify of the business opportunities to be found in the South. The time and place were well chosen. Nearly a hundred gentlemen attended the meeting, whose homes were in four or five States. The people of Charlotte entertained them most courteously, (a habit they have in North Carolina when strangers properly accredited come among them,) and the meetings were largely attended. The outcome of this gathering was of even more importance than its originators had anticipated. A series of resolutions, carefully worded, were adopted, in which the business, social and political relations of Northern-born people with their neighbors in the South were truthfully portrayed. These and the statements made concerning the natural resources and business advantages of the States represented were afterwards published in a pamphlet by order of the legislature of North Carolina, and many thousand copies were distributed throughout the North.

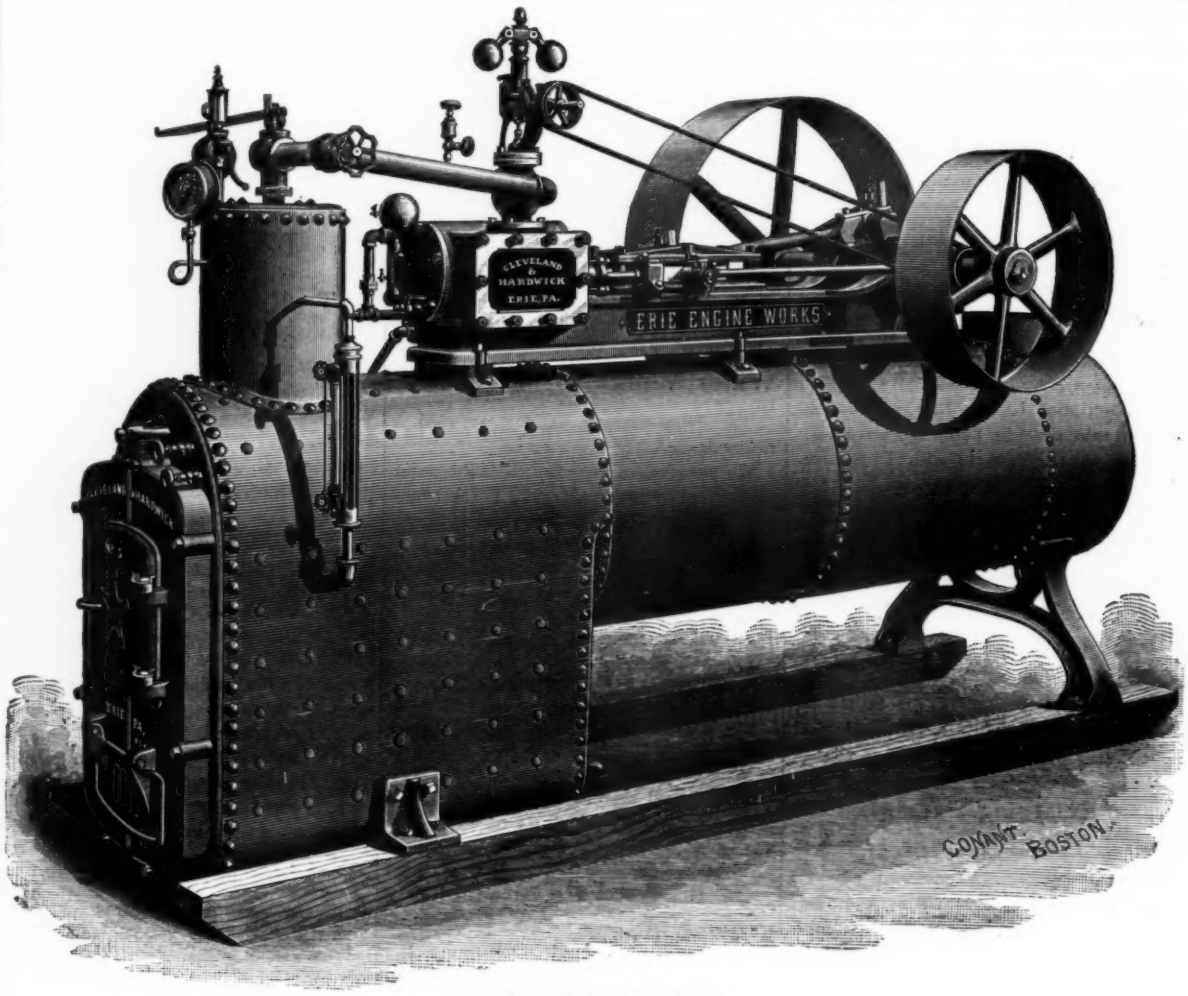
To Northern-born citizens of North Carolina is due the honor of having made the first effective effort to remove the misunderstandings engendered by the great conflict, and to prepare the way for that happy reunion and fraternity that now exist among the people of all sections. The expositions at Atlanta, Louisville, Raleigh and New Orleans have perfected the work of which the Charlotte conference laid the cornerstone, by bringing into the "sunlight of publicity" the vast resources of the South.

Among the public acts adopted by several Southern legislatures at the sessions following the return of peace were measures for securing foreign emigrants. The destruction of the old labor system and the dazed condition of the freedmen gave rise to a general apprehension that agriculture could not be resumed while dependent upon them. Naturally, therefore, thoughtful Southern men sought to secure a share of that foreign labor which had been for many years pouring in at Northern ports, and had furnished the muscles and sinews for every kind of industrial development from Boston to the Rocky mountains. These efforts to a large extent failed, but meanwhile the troublesome labor problem was solved, and the anxiety to secure foreign laborers was felt no longer. The high prices which cotton commanded for a number of years, and the good crops of that and of other staples, put vast sums of money into the South, and added hope and buoyancy to the courage with which its men had undertaken to rebuild their shattered fortunes. The Southern school-boys of that period saw the work their fathers were doing, and learned from their examples what industry joined to pluck can accomplish. They grew up to manhood with very different ideas and ambitions from those which prevailed among their kind before the war, and they entered upon their life work determined to win success. The building of railroads, the opening of mines of iron and coal, the starting up of smelting works, iron foundries, machine shops, oil mills, chemical laboratories in connection with fertilizer factories, and many other industries were but so many new opportunities for them. Agriculture, manufacture and commerce have greater attractions for the majority of the intelligent young men of this section than the learned professions or political life, for they see that the wealth and power of the South will in the future come from those sources. Men of this mind are now making their influence felt in every Southern State.

With the development of their natural resources, and with the steady increase of diversified industries among them, there has gradually grown up in every State an earnest desire to secure additions to their population of men skilled in agriculture and the useful arts, or who will furnish capital for industrial enterprises. The first formal expression on a large scale of this desire was made by Atlanta in 1881, when her business men invited the North to assist her in making an exposition. The next was the action of the authorities of the Richmond & Danville system, who sent Major McPhail to Boston in 1882 to repeat in that city the exhibition he made at Atlanta. The next year North Carolina's wonderful display was taken to Boston, and attracted people from every county in New England to see it. The governor of the State and all the executive officers of the Department of Agriculture were there to invite people to settle in North Carolina. In 1884 the State as a whole had an exposition at Raleigh for the same purpose, and in 1885 she was among the foremost of the exhibitors at New Orleans. These efforts have repaid the State a thousand fold more than their cost. But one thing was lacking to make these efforts complete, and that the Northern-born settlers propose to supply at this convention. They have called it that they may corroborate all the assurances that was given them by the State's officials before they made up their minds to come here. Believing that their declarations will have weight at the North, they are preparing to tell why they prefer their new to their former homes. There will be no orations or smoothly written essays, but plain, practical, common-sense talks by earnest men, who have reasons to give for their faith. They have found that the sentiment heretofore referred to is animating the middle aged and the young men of North Carolina; that they welcome heartily all who come to share in the grand progress the South is making in every line of industrial activity, and they wish to have all these things thoroughly understood by the Northern communities among whom they once lived, that others may come as they did, and become also fellow shareholders in the rewards of the good work in which they are engaged. B. S. P.

Portable Engine.

The illustration on this page shows a portable engine and boiler manufactured by the Erie Engine Works, Cleveland, Ohio. The engine is made 6 to 40-horse-power inclusive. This style of engine and boiler combined is particularly adapted for portable work, where no expensive or permanent foundation is required, the outfit being complete and ready for use when leaving works of the manufacturers. The engine may at any time be detached from boiler by simply taking out the bolts holding it to the iron saddles on the boiler, leaving no holes to plug and disconnecting the steam pipe.



PORTABLE ENGINE AND BOILER.

These engines have steel piston, valve rods and wrist pins. Locomotive slides and all bearings and wearing surfaces are sufficiently large. The cylinders are set low on the bed and have hot-air jackets, thereby decreasing condensation. Special attention has been paid to the arrangement of the steam chest, ports and heater, so that the most perfect drainage is secured. The heater is independent of the bed, and all pipes are easily accessible. The shafts used are hammered steel, and all brasses are entirely new material. Each engine is thoroughly tested under steam and guaranteed before leaving the works.

The boiler is made of the best charcoal and flange iron, with "fire box" iron in the furnace. No brick linings are required in the furnace. All parts exposed to fire are heating surface and protected by water space around the fire, which forms a perfect safeguard against burning the iron. This water space also secures free circulation of water and allows all sediment to settle below the fire line. A fusible plug is placed in the crown sheet, which will melt and allow the steam to extinguish the fire in case of low water. In addition to the "blow-off" valve, hand-hole plates are provided in suitable places for cleaning. The fronts are easily removed, giving free access to the flues and fire box, and are so constructed to allow for contraction and expansion, thereby preventing cracking as often occurs. The door liner is not bolted or riveted to the door as usually done, and is easily removed when a new liner is required. The draft door hangs on a hinge, and has a slide damper to more easily regulate the fire. The boiler is well stayed, braced and riveted, has wrought iron dome and tested 150 pounds Hydrostatic pressure per square inch, and insured for one year by a responsible steam boiler inspection and insurance company, the policy of which is given to the purchaser. The manufacturers of these engines and boilers had a fine exhibit at the recent Minneapolis Exposition. The following in regard to it is from the St. Louis Age of Steel:

"Steam users and those interested in electric lighting are giving considerable attention to what is to most of the visitors at the Exposition a decided novelty. We refer to the Erie Engine Works Engine, made by Cleveland & Hardwick, Erie, Pa., in the Machinery Department. A plain-slide valve engine is directly belted to an Edison dynamo, and, it is claimed, furnishes as good lights as those provided by the high-speed engines. The engine, a side crank, 30-horse-power, is running a 200-light dynamo, and is controlled by a Brozelle governor. It has been contended that only high-speed engines, requiring constant care and attention, will do satisfactory work in electric lighting. This engine is running at a moderate speed, and only requires the attention given to slide-valve engines."

A Georgia Mining Region.

PINE MOUNTAIN, GA., Oct. 9, 1886.

Editor Manufacturers' Record:

This mountain village has just been given a new impulse by the development of the corundum mines on Laurel creek, half a mile east of the place. Ten residences have been built this year, and arrangements are being made for more. This mine is owned by the Hampden Emery Co., Chester, Mass., whose finishing works are at Chester, and their shipments from here to that place will average 10,000 pounds weekly; but after their finishing works are put up here another impetus will be given to this place, as a much larger force will then be necessary, consequently necessarily increasing the population. This town is founded on a basis that insures it to be of no ephemeral existence, as the mining industry alone would support it; and Dr. H. S. Lucas, the senior member of the Hampden Emery Co., the discoverer and pioneer corumdum miner in the United States, is of the opinion that next century will not see these mines exhausted. The present indications are that here is the richest find of oxide of aluminum in the world. A vein has just been uncovered, at a point a little above water level, where two other veins branch off to the left; this one is from six to eight feet wide, and it is uncovered so as to define its track for a hundred and fifty feet above, running northwest, with the whole of Pine Mountain in its front. The depth to which corundum reaches is unknown. One mile west of here is the famous Sulphur Spring of this region, which is spoken of as the "harmless water," because it matters not how much one drinks of it no oppression or unpleasantness is felt from it. Its medicinal properties are undoubted, and many visit it to drink its waters. It is located in a grand, beautiful and picturesque sylvan locality, on the north bank of the Gunloco river, at the foot of one mountain and fronted by another on the south bank of the river. The woodman's axe has not yet despoiled this locality of its primeval vesture. A commodious hotel, perfect and complete in all its appointments, will be erected here next year for the accommodation of the many visitors to this locality, who wish the pleasure and benefits of its summer zephyrs, its mineral and icy cold soft waters, because near the Sulphur Springs there are springs of pure water in plenty. Another advantage is, this locality is in the midst of a very productive region, and here the highways converge from the 4 cardinal points, making it the mark for a considerable area.

Farming ventures here are successful to the extent that they have been carried, and for the area in cultivation farm products are wonderfully cheap. Farming lands are plenty and cheap, ranging in price from $1 to $5 per acre, and they are covered with an unbroken forest of pines, hemlocks, oaks, hickory, chestnut, poplar, birch, walnut, beech, maple, dogwood and persimmon. The water power is plentiful and unfailing, and is here in sufficient quantity to drive any amount and any kind of machinery. The hop grows here to perfection, and matures with as much *lupuline* as those grown in any other part of the world, while the hillsides will produce as fine flavored grapes as mature under Italian skies. Apples, peaches and cherries are unfailing crops, while small fruits grow in profusion. Here the *Panicum Crusgalli* and *Panicum Agrostoides* grow with a luxuriance that I have not seen elsewhere, and the *Agrostis Vulgaris* and Eleusine Indica flourish, while the *Lespedeza Striata* is rapidly spreading its nutritious mantle over this locality. So for hay and summer grazing it is a good locality. As for beautiful sites for residences this section is equaled by few, and surpassed by less. Here we are 1,600 feet above the sea, on a highland plateau that is not subject to the extremes of heat, cold or draught that prevail in lower sections.

This section is south of the Blue Ridge facing the Atlantic seaboard, whose vapor laden winds shed their waters on these heights in sufficient quantity to insure the growth of all cultivable products suitable to this altitude. We are on the 34° of North lattitude and near the isotherm of 59°. This accounts for our mild winters and pleasant summers. This is in the mineral belt of Georgia, in Rabun county, which in size is about 25 by 30 miles, and does not pole a thousand votes. So there is room here for hundreds more. Corundum, asbestos, gold and mica all abound in this locality. A mica mine has just begun operations at Bald Mountain, 7 miles west from here. The spirit of improvement is advancing, streams are being bridged, new highways opened, and churches and school-houses are rising up as if by magic, and one may reasonably predict that ere long all these mountain solitudes will awake to the echo of industry's reverberating hum.

J. W. WALKER.

The Cotton Crop.

The October report of the United States Agricultural Department shows that the average condition of the cotton crop is now 79.3 against 78 same time last year, and as the acreage is slightly larger this year than last, there is a possibility of this crop being in excess of last year's. As the crop is, however, later than usual, it must encounter increased danger from frost, which might materially reduce the yield from present prospects. The Department's report says:

The cotton season has been variable in temperature and precipitation for the best development and largest fruitage. It was too dry in September on the Atlantic coast, resulting in the further shedding of bolls. The boll worms have wrought local injury in the Gulf States, and the caterpillar in a less degree. The weather has been comparatively favorable for picking, except for the excessive heat and for rains in the Mississippi valley and Texas. The season is late and the risks of an early frost are therefore greater than usual, and liable to discount the present apparent condition. In Georgia and Alabama the condition is reported the same as last month. Tennessee makes a slight improvement. The Carolinas, Mississippi, Louisiana, Texas and Arkansas show a small reduction. The averages are:

Virginia	72
North Carolina	75
South Carolina	74
Georgia	81
Florida	85
Alabama	80
Mississippi	79
Louisiana	79
Texas	74
Arkansas	86
Tennessee	96

The average of condition is 7.93 against 8.01 last month and 78 in October of last year. It is six points below the October average of the crop of 1879. The local estimate of yield per acre in fractions of a bale are made by correspondents subject to the vicissitudes of a later season, and especially the lateness of a killing frost. They must not, therefore, be cited as official predictions of the result of the harvest. The State averages are as follows:

Virginia	32
North Carolina	37
South Carolina	31
Georgia	30
Florida	27
Alabama	29
Mississippi	40
Louisiana	49
Texas	37
Arkansas	52
Tennessee	35

The general average is 36 as a summary of the situation. The average of the condition is a point higher than last year. The area is 1 per cent. more and the season later. The difference between a long and short season may easily be half a million bales.

MINING NOTES.

By T. K. BRUNER, Salisbury, N. C.

HENDERSON MINE.

At the Henderson Mine, in Mecklenburg county, two bodies of ore have been cut,—one long known, but so refractory as to have been avoided, and one new body of brown ore. Both bodies are quite wide, and, so far as explored, quite extensive and of more than ordinary grade. A ten-stamp mill is nearly ready here, and the underground works are pushed vigorously, both in depth and length.

RUDISIL MINE.

The work at the Rudisil Mine, also in Mecklenburg county, has been pushed considerably farther to the south, *i. e.*, further in the south extension of the vein, and with encouraging results. Both milling and concentrating material is obtained. The work here is conducted very systematically and quietly, and (the writer is not fully informed on this point) apparently the result is satisfactory.

The steady work here is beginning to tell, just as it has done at the St. Catherine Mine. It will eventually be found that the resources of the Rudisil are not one whit behind that mine. The two embry tables for concentrating have given the best results, and several parties who have seen them at work have expressed an intention to introduce them at other mines.

ST. CATHERINE MINE.

The St. Catherine may be called the leading mine in Mecklenburg county. No change of importance has taken place recently in the operations. The work is very systematic and the production steady. What better record could any mine have, especially when it is added that the management is competent and economical?

The deep shaft is now being sunk below the 370-foot level, and has reached the depth of 422 feet. A new body of ore, entirely unexpected, has been cut, and adds materially to the resources of the mine. The systematic cross cutting has already brought to light several unexpected ore bodies. The work is in the best of shapes, and one if not two years' reserves of ore are now at hand.

AROUND CHARLOTTE.

The small mining about the town of Charlotte, or immediate vicinage, is larger than at any time in five years, and is possibly adding not less than $1,000 per month to the circulation. This represents labor, which would otherwise be lost. Quiet negotiations are in progress respecting several mines. What will result is as yet hardly more than matter of conjecture. But altogether the outlook in Mecklenburg is bright, not only as to the sale of mining property, but in the more practical side of the mining problem. There is much activity; there is competent management, and there are fair returns for labor and capital invested. This, then, is a good report.

BOILSTON MINE.

The Boilston Mine in Henderson county, N. C., is now producing, its ten-stamp mill being quite recently set in motion. The vein is very extensive at the Boilston, wide and long, and ore is abundant.

THE MASSACHUSETTS GEM.

It is reported that "a deposit of precious stones of the rare kind known as 'golden beryl' has recently been found in the Berkshire Hills." This is called a "new gem" by the chronicler of the find. He should have added, a new gem for Massachusetts. Golden beryl has long been known among the North Carolina gem stones, and is quite abundant in some of the counties in the western part of the State. Prof. Kuntz, of New York, pronounces the Massachusetts beryls of rare purity, and Prof. Dana, of Yale College, is also reported as pronouncing the crystals the finest ever seen by him. It appears from this exceptionally good testimony that the golden beryls found in Massachusetts are freer from the flaws and "feathers," which are common to the beryl wherever found, than usual. If this be true, then the value of the find for gem purposes is greatly enhanced. The cut gem, when perfect, is very brilliant, and of rich yellow color in daylight, but loses much of its color, but none of its brilliancy, by artificial light.

The gem beryls of this State embrace the golden or chrysoberyl, aquamarines of pale sea green, and various shades of light blue, limpid white, and the true emerald. The generic term "beryl" is often lost sight of, especially after the stones reach the hands of the jeweler. Beryl has a hardness of 7.5 to 8; specific gravity 2.6 to 2.7, and is composed of silica, alumina and glucina. The green color of the emerald is due to the presence of a small quantity of chromium.

Making Cheap Steel.

Mr. Frederick Sloss, of Birmingham, has lately been in Pittsburgh, and, according to the Pittsburgh Dispatch, "purchased from Mr. Jacob Reese, the inventor, the right to use the basic process in Alabama." As the Pratt Coal & Iron Co. control the right to this process for Jefferson county, Ala., it is possible that Mr. Sloss has secured the right for the balance of the State. In an interview with a reporter of the Dispatch, Mr. Sloss said:

"We can make steel at the usual cost of pig iron. This may sound strange, but I'll explain it. The English government recently employed Dr. Monroe, professor of chemistry of the College of Agriculture, of Downton, Salisbury, England, to determine the relative value of guano and other phosphates as compared with the raw slag from a basic steel converter. Dr. Monroe's experiments proved that basic slag is as good a fertilizer as guano, and is much better than coprolites and the Charleston phosphate, because it contains more phosphoric acid. One ton of slag contains 20 per cent. of phosphoric acid, which is worth from 6 to 10 cents per pound. For every ton of steel made there are 700 pounds of slag, which contains 140 pounds of phosphoric acid. Hence, the slag from each ton of steel is worth $8.40, placing the phosphoric acid at 6 cents a pound, which is the lowest market price in the United States. Now, as the actual cost of converting a ton of pig iron into a ton of steel is about $8, you see that the slag when sold for fertilizer brings as much as the cost of converting by the basic process; or, as I said at first, we buy the pig iron and it costs us nothing to convert it into steel. The slag from furnaces other than the basic contains no phosphorus, and hence is worthless."

THE Enquirer-Sun, of Columbus, Ga., has issued a splendid trade edition, in which a fine showing is made of the advantages of that prosperous city and the growth of its trade and manufacturing interests.

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises, and needing machinery or supplies of any kind, will find it profitable to consult the advertising columns of the MANUFACTURERS' RECORD. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

Capital Increased and Works to be Enlarged.

BIRMINGHAM, ALA., Oct. 11, 1886.

Editor Manufacturers' Record:

We have increased our capital stock to $30,000, and will make improvements and enlargements, hoping to catch up with orders, many of which we have to refuse with present capacity.

BIRMINGHAM CHAIN WORKS.
OLIVER WEISER, Supt.

STRASBURG, ALA., Oct. 10, 1886.

Editor Manufacturers' Record:

I have erected a new cotton gin, and expect to add a grist mill as soon as ginning is over, and a small flouring mill, perhaps.

J. W. MADDON & SONS.

LONGWOOD, FLA., Oct. 10, 1886.

Editor Manufacturers' Record:

We are moving our saw mill and sash factory, and besides, are putting up our car shops in Oakland, too.

P. A. DEMENS & CO.

Erecting Electric Light Plant.

MERIDIAN, MISS., Oct. 8, 1886.

Editor Manufacturers' Record:

We are putting in our mill an Edison electric light plant of 75 lights.

MERIDIAN OIL MILLS AND MFG. CO.

ATLANTA, GA., Oct. 5, 1886.

Editor Manufacturers' Record:

We propose to build a line of railroad from Atlanta to Selma, Ala., 180 miles, as soon as charters in Georgia and Alabama are perfected.

ATLANTA & ALABAMA R. R. CO.
L. E. O'KEEFE.

Will Build Water Works.

TEXARKANA, ARK., Oct. 7, 1886.

Editor Manufacturers' Record:

We have a contract for a street railway before the council, which will be considered at our next meeting. On last Monday night the council passed an ordinance contracting with the Texarkana Water Co. to erect water works; work to begin in sixty days, and to be completed in eight months; the Holly system to be used.

E. A. SCHICKER, Mayor.

J. W. PECK, Mossy Creek, Tenn., wants to engage several mechanics who understand making and burning pottery ware.

IRON MILL
FOR SALE at a SACRIFICE.

A RAIL MILL, completely equipped for manufacturing Rails, and well adapted to making Bar and Plate Iron and Nails, is for sale at about **One-Fifth its Cost!**

It is located on the Mississipi River near a large city, with both rail and water transportation.

Buildings, Engines and Machinery are new and of the best quality, with ample power.

Full particulars, with inventory of machinery and view of mill, by addressing

Iron Mill,
Care THE MANUFACTURERS' RECORD,
Baltimore, Md.

TWO WATER POWERS
On same stream and in sight of each other
FOR SALE.

Fall about 18 feet, and about 30 horse power each One is now running a one set woolen mill, building new, 2 stories, and large enough for two set mill. Well located. At the other place is a mill house. Good location for business of any kind. In connection with these water powers there are 200 acres of good land, with two dwelling houses, barns and all other out-buildings. Will sell all together or separately. For full description write to

HENRY MILLER & SON,
JONESBORO, TENN.

FOR SALE.
Contractors' Supplies of all Kinds.
RAILROAD EQUIPMENT
Rails, Spikes, etc., Water, Sewer and Gas Pipe, Mill Machinery, Tools and Implements.
WE PAY CASH
For Old Iron, Rails, Scrap, and Buy and Sell Second-hand Property of Every Description. Correspondence Solicited.
BARROWS & CO., 64 & 66 Broadway, N. Y.

Cotton Seed Oil Mill and Ginnery
FOR SALE.

Capacity twenty tons per day. Titles perfect. A fine and valuable property, in the town of Pittsburgh, Texas. For particulars, address,

E. VAN WINKLE & CO., Atlanta, Ga.

Wanted!

Situation as Superintendent of a Cotton Factory. Best of references given. Now engaged in the South. Address N. C., care MANUFACTURERS' RECORD, Baltimore.

65-HORSE-POWER
HORIZONTAL, STATIONARY
STEAM ENGINE
FOR SALE!

Second-hand, but warranted good as new. Will be sold cheap for cash. Address,

W. C. BUCHANAN, Lancaster, Pa.

For Sale, Cheap.
4,000 ft. 3 in. & 52 ft. 6 in. Gas Pipe.

Has been used only 6 months for conducting water. Will be sold in any quantity.

Geo. H. Cornelson,
Orangeburg, S. C.

BALTIMORE
Journal of Commerce
And PRICE-CURRENT.

A Weekly Paper,

Devoted to the General Commercial Interests of Baltimore and the South.

Its Market Reports and Quotations of Prices *will be edited with the utmost care, and will be complete and reliable. It will publish the most full, complete and authentic information and statistics on all matters of interest to commission and shipping merchants. It will watch closely and note accurately the condition of the markets in*

GRAIN, FLOUR, COTTON, TOBACCO, LUMBER, NAVAL STORES,

And PRODUCE in general, including **Hides, Roots** *and* **Herbs, &c.** *It will also publish full and accurate jobbing quotations of* **Food Stuffs, Groceries, Dry Goods, &c.** *This feature of the paper will make it invaluable to*

Shippers & Handlers of Produce,
TO GROCERS,
And General Stores.

Business Chances.

☞ For the purpose of making the MANUFACTURERS' RECORD a still more valuable medium of communication between its readers North and South, we will publish, FREE OF CHARGE, short advertisements, not exceeding 40 words, from those in the South who have good business openings that they wish to bring to public notice, capital wanted for industrial enterprises, &c., &c.; while readers in other sections who desire to engage in manufactures at the South are also invited to use these columns, without cost, either in seeking information regarding the advantages and special claims of different localities, or for asking about good openings for men and money. This department is also free for Southern manufacturers who wish to advertise for mill managers superintendents, engineers, &c.

In corresponding with any of these advertisers please mention the Baltimore Manufacturers' Record.

Parties advertising in this column must have replies sent to their own address, and not to care of Manufacturers' Record, unless stamps are sent for forwarding replies. Advertisements sent not in accordance with this requirement will not be inserted.

WANTED.—Some enterprising company to manufacture and sell patent anti-friction cutting apparatus for mowers and reapers. Can be made and attached to new machines or any second-hand machine now in use. For particulars and description address J. C. V., Box 289, El Paso, Texas.

VALUBLE IRON PROPERTY near Roanoke City, Va., for sale. Fully developed; title perfect; 500 acres; over one mile of iron ore. For description, analysis, samples, &c., &c., address, R. H. Logan, Salem, Va.

2,800 ACRES of iron lands, fully developed, conveniently located, fine furnace location, on N. & W. R. R., Va., will be sold very cheap. For price, analysis, map, &c., &c., address, L. C. Hansbrough, Salem, Va.

9,000 ACRES of timber land, 13 miles long, title perfect, price $1 per acre. For particulars address, F. J. Chapman, Salem, Va.

PARTNER WANTED in hardwood business in the South. Owner has fine retail trade in lumber, stair work, mouldings, &c., but wishing to be relieved of care, would sell one-half interest to good party, who must be fully competent to estimate on all kinds of interior finish and able to manage 25 to 50 hands. Five to six thousand dollars and best of reference required. Stock first-class and machinery all new. Good local demand for all the work. No bonus required. For further particulars address "Hardwood," care of MANUFACTURERS' RECORD.

A CHANCE SELDOM OFFERED.—For Sale, a controlling interest in one of the best printing offices in the South. Publishes two nine column papers. In grand locality for business, and the office is new and well patronized. Employs 20 to 25 hands in the winter season. $2,500 cash needed only or will exchange for property in the North Sold on account of failing health of the advertiser. Address, B. C. F., care MANUFACTURERS' RECORD, Baltimore, Md.

WANTED—By a practical pressed brick maker, capital to manufacture brick in the South. Best place in the United States; brick sell at $7.00 to $16.00 per M. No limit to demand. C. B. Chase, Sheffield, Ala.

$10,000 WANTED for one or two years in a manufacturing concern in the South. Can give satisfactory security, either real estate or collateral. Will pay a good rate of interest. Address, A. T., care MANUFACTURERS' RECORD.

WOODEN PIPE MANUFACTURERS.—Mr. C. G. Viele, of Salisbury, N. C., wants to correspond with some foreman or skilled workman in a wooden smoking pipe factory.

WANTED.—The address of dealers in sheep, elk, deer and other skins. Address, J. L. Sheppard, Charleston, S. C.

FOR SALE.—Sawing, planing and grist mill driven by 18-horse-power Frick engine; a splendid trade established; convenient to railroad and water; thriving town; good site for factory of any kind; plenty of room. Apply to Thomas A. Ogden, Middletown, Frederick Co., Va.

WANTED.—$10,000 to patent and manufacture a combined cotton thinner and cultivator, two cultivators, a sugar-cane cutter, a cotton press and a wagon axle—all good devices. A half interest will be given. W. C. Bibb, Atlanta, Ga.

A RARE OPPORTUNITY.—Wanted.—A good business man, mechanic or otherwise, with energy and push, and from $20,000 to $25,000 capital, to purchase a half interest in a thriving and prosperous machine works in one of the most important cities in the South. Capital wanted to increase business, having been obliged to decline more contracts during the year than were accepted. No competition in this particular line south of Chicago. Apply to BALTIMORE MANUFACTURERS' RECORD.

WANTED—Capital to build the Dennis Cotton Worm and Insect Destroyer—patent just allowed—or will sell the patent. It will kill the insects on all farm crops, and at the rate of 20 to 50 acres per day. Address, W. J. Dennis, Augusta, Ga.

TOBACCO MANUFACTORY in the best tobacco section of Kentucky, at intersection of Memphis Branch L. & N. and O. & N. Railroads. This is a splendid point for above business. A building well adapted can be procured. Address I. C. Barclay, Russellville, Ky.

WANTED.—A practical foundry man, with 4,000 to 5,000 dollars, to take an interest in a machine and boiler works in a Southern city. A splendid opening for the right man. Address, Practical, care Baltimore MANUFACTURERS' RECORD.

WANTED.—Situation as superintendent of cotton factory. Best references given. Now engaged in the South. Address N. C., care MANUFACTURERS' RECORD, Baltimore.

WANTED.—Purchasers for farming lands and ranch property near Ballinger, the growing city of West Texas, the terminus of the Western division of the G. C. & S. F. R. R. Information about West Texas cheerfully given. Address Guion & Blanchard, Ballinger, Texas.

WANTED—Partner or lessee for a sanitarium on Catawba river; unsurpassed climate, scenery and water view; best water power; stock farm, meadows and grasses; gold vein; 1,047 acres, seven in water. every variety of timber; 12 miles from Charlotte, N. C. Address Mrs. Dr. J. M. Davidson, Mountain Island, Gaston Co., N. C.

WANTED.—A party with one or two thousand dollars to engage in manufacturing. For information address Lineback & Brooks, care of J. T. Patrick, Raleigh, N. C.

TIMBER MERCHANTS—Will find Apalachicola, Fla., the finest opening in the South. Inexhaustible supply of yellow pine and cypress, which can be procured at cheap prices. Sticks measuring three and four thousand feet of merchantable lumber brought to market. Enquiries answered by H. W. Johnston, Apalachicola, Fla.

ONE of the finest opportunities offered to party with small means who desires a half interest in an established sash, door, blind and moulding factory. The factory is now running to its fullest capacity, and orders far ahead are always on hand. Address J. B. Makepeace, Sanford, N. C.

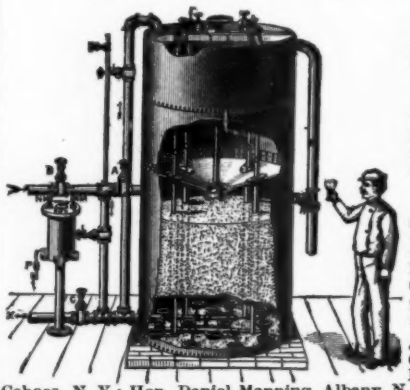
A VALUABLE water power and 500 acres of land, on which are several deposits of very fine marl, which might be manufactured into fertilizer. For information address A. J. Potter, Town Creek Postoffice, N. C.

WANTED—A partner to take interest in fruit and nursery business. Address, E. E. Forsyth, Raleigh, N. C.

WANTED.—A practical paper manufacturer with some capital, to assist in running a paper mill for working refuse sugar cane fibre. Mill is erected and in running order, on a large sugar plantation, on railroad and river in Louisiana. Address K, Box 3,330, New Orleans, La.

WANTED—A Partner with $3,000 or $4,000 to take an interest in a sash and blind factory with planing mill attached. Good opening for a good man. Would prefer a first-class architect competent to superintend work. Address J. W. C., care MANUFACTURERS' RECORD.

The HYATT PURE WATER SYSTEM.
Adapting Nature's Process—Endorsed by the Highest Authority.



A Perfect Water Purifying System.

In constant use by Cities, Towns, Water Companies, Factories, Mills, Steam Boilers, Public Institutions, Private Residences.

Indispensable to Textile Manufacturers.

Adapted to every condition requiring **Clean, Bright Water in any quantity.** Perfect in Operation, Quickly Cleaned Automatically, Reliable, Indestructible.

MUDDY WATER MADE CLEAN.
HARD WATER MADE SOFT.

Organic and semi-soluble elements removed. **Scale and Mud Deposits in Boilers Prevented.** With hundreds of plants in operation, treating all kinds of water, our system **HAS NEVER FAILED. Promised Results Guaranteed.** Adopted by Somerville & Raritan N. J. Water Co.; City Water Co., Belleville, Ill.; Water Works, Charleston, W. Va.; Clark Thread Works, Newark, N. J.; Earl & Wilson, Troy, N. Y.; Norfolk & N. B. Hosiery Co., New Brunswick, N. J.; Victor Knitting Mills, and sixteen other knitting mills, in Cohoes, N. Y.; Hon. Daniel Manning, Albany, N. Y.; Western Steel Works, St. Louis, Mo., and hundreds of others. *Representative Agents Wanted. For Circulars, Prices, &c., Address*

THE NEWARK FILTERING CO., Tribune Building, NEW YORK.

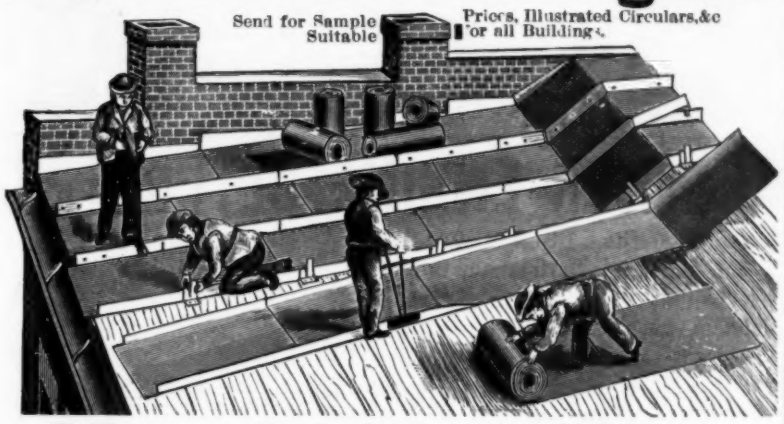
CORRUGATED

IRON
ROOFING
SIDING, CEILING,
ARCHES AND LATH.
CINCINNATI
CORRUGATING CO.
CINCINNATI, O.
SEND FOR ILLUSTRATED CATALOGUE.

CRIMPED

Holton Iron Roofing Co.

Send for Sample Suitable Prices, Illustrated Circulars, &c for all Buildings.



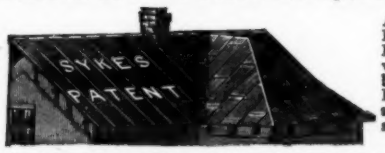
New Lisbon Ohio.

CRIMPED & CORRUGATED
IRON ROOFING,
SIDING. METAL
CEILING. SHINGLES.
W.G.HYNDMAN & CO.
SEND FOR CIRCULAR & PRICES CINCINNATI, O.

CRIMPED

SYKES IRON ROOFING CO., NILES, O.

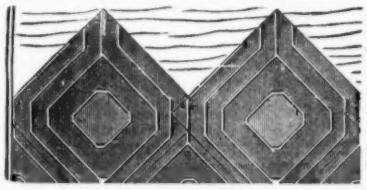
SYKES' IMPROVED
Best Roof in the World.
Suitable for all classes of Buildings.
Easy Put On.



All my Iron is Re-Rolled and Box Annealed, well Painted on both sides with Best of Paint and Pure Linseed Oil.

CORRUGATED

Send for Circular and Price List, and mention this Paper.



BEST ROOF
In the World is the Montross Patent
Metal Shingles
Send for Circulars and Price-Lists Free.
E. VAN NOORDEN & CO.,
383 Harrison Ave., Boston, Mass.

THE
Cone Baling Press.

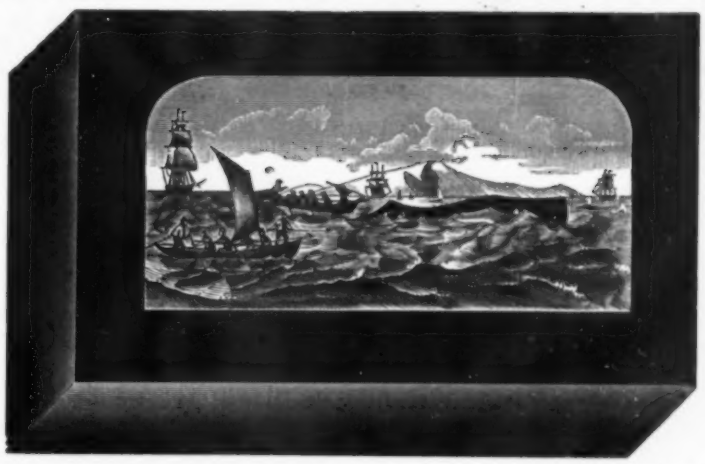
We desire to call the attention of Factories, Farmers and Planters, and all others in need of a superior machine to our hand power Cone Press, which for power, speed, strength, durability, economy, &c., &c., surpasses all other Hand Presses used for baling Cotton, Rags, Hay, Broom Corn, Tobacco, &c. It does not require skilled labor to work the Press, but two ordinary farm or other laborers of average intelligence can pack from 50 to 60 bales of Hay per day, each bale averaging from 200 to 250 pounds, or from 750 to 1,000 pounds of rags. Address with orders or for circulars,

THE CONE BALING PRESS CO.
34 N. Holliday St.
BALTIMORE, MD.

The Oldest Oil House in the City. Business Established 1832 (on Present Premises.)

WM. C. ROBINSON & SON,
81 SOUTH ST., BALTIMORE, MD.

Manufacturers and Wholesale Dealers in **OILS!**



Specialties—Oils for Cotton and Woolen Mills, Railroads, Tanners' and Machinery Use.

Our Colophine Cylinder Oil is the best in use, 650° fire test, 28° gravity. Perfect Engine Oil 600° fire test, 20° gravity. Colophine Engine Oil 550° fire test, 23° gravity. Agent for Downer's Spindle, Champion and Mineral Sperm, Meriam & Morgan's Paraffine Co's Paraffine, William's Odorless Lubriphene Oils. Also Manufacturers' Agent for 25°, 28° and 30° Paraffine, and 31° Neutral Bloomless Oils. Correspondence solicited.

A. HOEN & CO.
LITHOGRAPHERS, BALTIMORE MD.

ESTABLISHED 1835.

THE HOEN BUILDING.

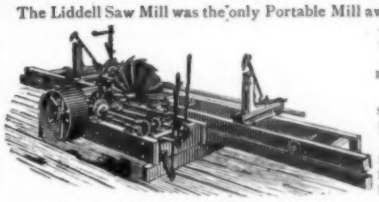
Our facilities for the production of
ARTISTIC
Color Work
AND ALL STYLES OF
Fine Commercial Engraving
Are Unsurpassed.
All work executed under careful and personal supervision at prices consistent with first-class productions. Sole proprietors of the
CELEBRATED
LITHOCAUSTIC PROCESS
Branch Establishment:
Hoen Building, RICHMOND, VA.

LIDDELL & CO., and FORBES LIDDELL & CO.,
Charlotte, N. C. Montgomery, Ala.
MANUFACTURERS OF
Cotton Presses, Saw Mills, Pulleys, Shafting, &c.

The Liddell Saw Mill was the only Portable Mill awarded a GOLD MEDAL of the FIRST CLASS at the World's Exposition at New Orleans 1884-1885.

Write for our descriptive circulars and price-lists.

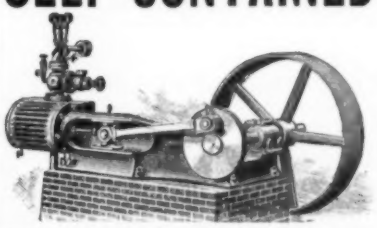
We build mills ranging in capacity from 5,000 ft. to 50,000 ft. of lumber per day.



THE LIDDELL VARIABLE FEED SAW MILL.

THE BOSS PRESS—2,400 sold.

SELF-CONTAINED STEAM ENGINES.
Stationary or Semi-Portable.



High Standard Maintained. Prices greatly Reduced. Write for New Illustrated Catalogue No. 25

CHANDLER & TAYLOR, Indianapolis, Ind.

ENGINES, SAW MILLS, AND DRAIN TILE

MACHINERY A SPECIALTY.

THE LIGHTNING IMPROVED POST HOLE AUGER

The Cutting Knives are Steel and are interchangeable, and can be made 3 different sizes.

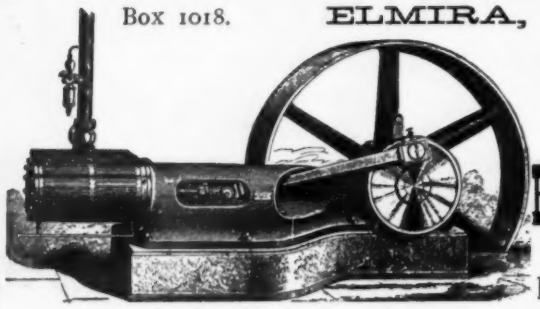
Will bore 200 3-ft. holes in one day, without any downward pressure. Will pay for itself in one day.

STRONGLY MADE.
Send for prices and large descriptive circular to

PETERS & LEDLIE MANUFACTURING CO.
1115 North Broadway, - - ST. LOUIS, MO.

B. W. PAYNE & SONS

Box 1018. ELMIRA, N. Y.



Builders of Stationery AND PORTABLE

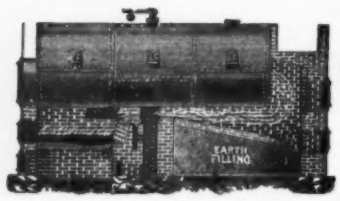
Engines & Boilers

FINE AUTOMATIC ENGINES.

VERTICAL AND SAFETY ENGINES AND BOILERS

For every duty. Particularly adapted for the South. Thousands now in use. We guarantee the "Payne Automatic" to furnish same power as the ordinary Throttling Engine at one-third to one-half less fuel and water, doing same work. Send for circulars and prices.

JARVIS PATENT FURNACE



FOR SETTING STEAM BOILERS.

Economy of Fuel, with increased capacity of Steam Power. Like the **Siemens Process of Making Steel,** it utilizes the waste gases with hot air on top of the fire. Will burn all kinds of waste fuel without a blast, including Slack Coal, Sawdust, Logwood Chips, &c. Send for Circulars.

Jarvis Engineering Co.,

A. F. UPTON, Treas. and Gen'l Manager,

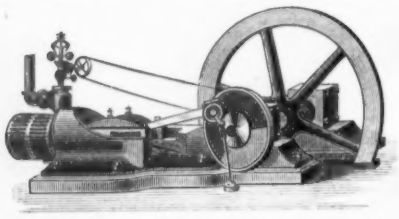
61 Oliver St., Boston, Mass.

JOSHUA C. COE, Agent for Maryland and Virginia, O'Donald's Wharf, Baltimore, Md.

SOUTHERN REFERENCES:

Eagle & Phenix Mfg. Company, Columbus, Ga.
Anniston Mfg. Co., Anniston Ala.
J. P. King Mfg. Co., Augusta, Ga.
Rose Mining Co., Charleston, S. C.
Maryland Pavement Co., Baltimore, Md.
Brush Electric Light Co., Baltimore, Md.
Ettrick, Matoaca and Battersea Mfg. Co's., Petersburg, Va.
Rasin Fertilizing Co., Baltimore, Md.
Tanner & Delaney Engine Co., Richmond, Va.
Sibley Mills, Augusta, Ga.
Graniteville Mfg. Co., Graniteville, S. C.
Charleston Bagging Co., Charleston, S. C.
P. H. Mayo & Bros., Richmond, Va.
Phosphate Mining Co., Beaufort, S. C.
Brush Swan Electric Light Co., Norfolk, Va.
Columbus Ice & Refrigerator Co., Columbus, Ga.
Lenoir Manufacturing Co., Lenoir, East Tennessee.
Vancleuse Mill, Graniteville, S. C.

HAMILTON WORKS.



WILLIAM TOD & CO.

YOUNGSTOWN, OHIO,

SOLE BUILDERS OF THE

PORTER-HAMILTON ENGINE

50 to 500 Horse-Power. Modern design. PLAIN, STRONG, EFFECTIVE, ECONOMICAL. COSTS LESS THAN ANY OTHER FIRST-CLASS ENGINE. Send for Photograph.

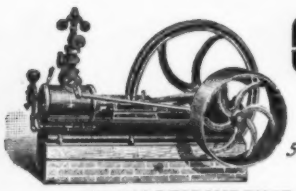
BLAST FURNACE ENGINES ON HAND.

ALSO A STOCK OF OTHER ENGINES (our make.) Prices and description on application.

FOR THE LOWEST-PRICED FIRST-CLASS

Engines AND Boilers

ADDRESS



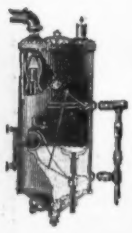
GEO. W. TIFFT, SONS & CO.

Buffalo, N. Y.

5 to 500 H. P. Special stock sizes 5 to 50 H. P., both Stationary and Semi-Portable.

CORRESPONDENCE SOLICITED. MENTION THIS PAPER.

The STEWART HEATER CO., Buffalo, N. Y.

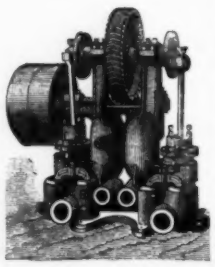


No. 19 & 21 CLINTON ST.

Do you Want to Economize?

The Stewart Heater is the only Feed Water Heater made, which prevents scale in boilers and saves 25 per cent. of fuel bill. Send for descriptive catalogue and price-list of

Heaters, Boiler Feed Pumps, Flue Cleaners, etc.



It will pay you to correspond with us before purchasing.

HOOPES & TOWNSEND,

MANUFACTURERS,

KEYSTONE BOILER RIVETS,

Cold Punched, Chamfered, Trimmed and Drilled Square and Hexagon Nuts.

Finished and Case-Hardened Steel Hexagon Nuts.

BRIDGE RODS and RIVETS.

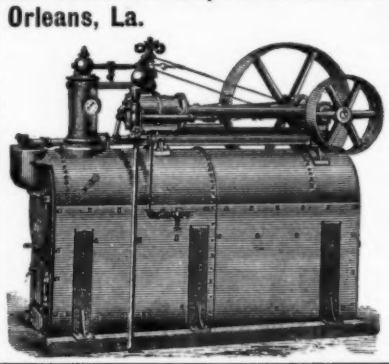
Builders' IRON Work.

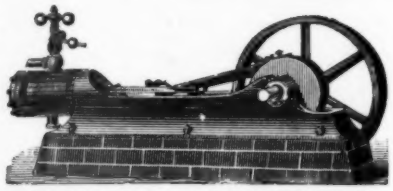
TANK and COOPERS' RIVETS.

PHILADELPHIA, PA.

SKINNER ENGINE CO. ERIE, PA.

Awarded THREE GOLD MEDALS by the World's Industrial and Cotton Centennial Exposition of New Orleans, La.





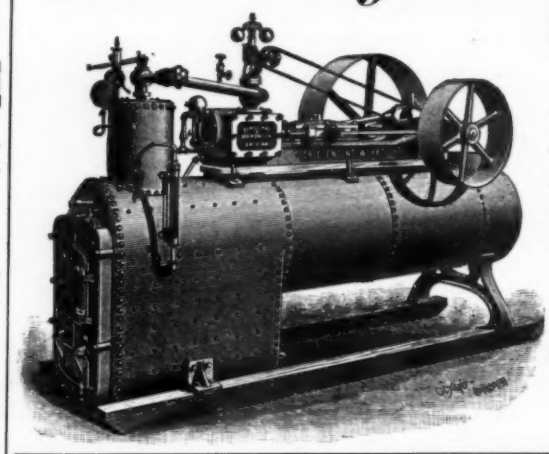
PORTABLE and STATIONARY

ENGINES and BOILERS

More than 2000 in Use.

Send for Illustrated Catalogue and Prices.

Erie Engine Works.



Cleveland & Hardwick,

ERIE, PA., U. S. A.

Stationary, Detached, Portable, Semi-Portable, Agricultural, } Engines.

Portable, Stationary, Vertical, } Boilers.

Send or Catalogue and Prices.

POND MACHINE TOOL CO.

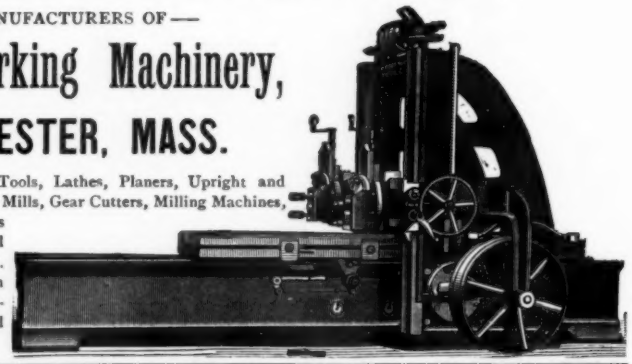
Successors to DAVID W. POND,

—MANUFACTURERS OF—

Iron Working Machinery,

WORCESTER, MASS.

Special Railroad Tools, Lathes, Planers, Upright and Radial Drills, Boring Mills, Gear Cutters, Milling Machines, Patent shafting Lathes Hand Punches and Shears, Planer Chucks. Special machinery in great variety. Estimates furnished. Send or catalogue.

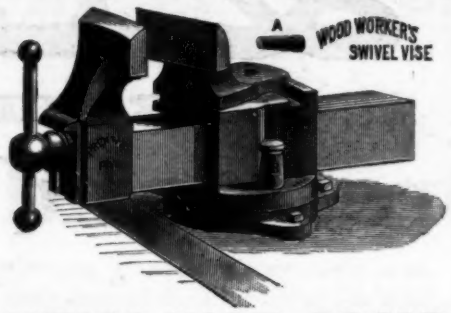


THE MANUFACTURERS' RECORD

IS THE FOREMOST EXPONENT OF THE INDUSTRIAL INTERESTS OF THE SOUTH.

Prentiss' Patent

VISES



VISES

PRENTISS VISE COMPANY,

SEND FOR CIRCULAR. 23 DEY STREET, NEW YORK.

Ludlow Valve Manfg. Co.

Office and Works:

938 to 954 River Street, and 67 to 83 Vail Avenue,

—TROY, N. Y.—

VALVES

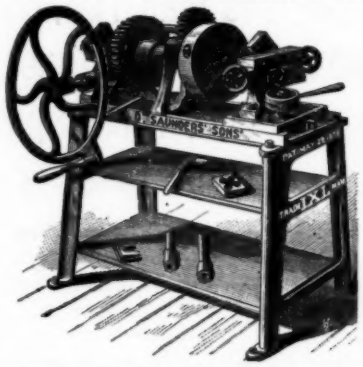
Double and Single Gate, ¼ Inch to 48 inch,—outside and inside Screws, Indicators, etc., for Gas, Water, Steam, Oil.

Send for Circular.

Also Fire Hydrants, Yard and Wash Hydrants, Check and Foot Valves.

D. SAUNDERS' SONS,

MANUFACTURERS OF THE ORIGINAL



TRADE **I.X.L.** MARK.

Pipe Cutting and Threading Machine.

BEWARE OF IMITATIONS. None genuine without our Trade Mark and name. Also

Patent Wheel Pipe Cutter

STEAM AND GAS FITTERS' HAND TOOLS,

Pipe Cutting and Threading Machine

For Pipe Mill Use a Specialty. Send for Catalogue B.

YONKERS, N. Y.

IMPROVED HOISTING ENGINES,

MANUFACTURED BY THE

LIDGERWOOD MFG. CO.,

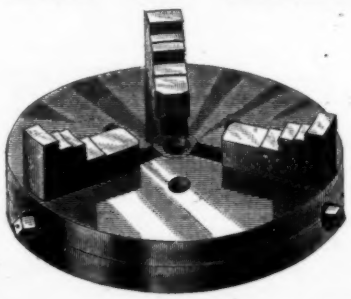
Offices and Salesrooms: 96 Liberty St., New York.

MORTON, REED & CO., Agents,

59 and 61 German St., Baltimore.

Specially adapted for Railroad and Contractors' uses, Pile-driving, Bridge and Dock Building, Excavating, etc. Single or double cylinders, with single or double improved friction drums, with or without Boilers.

The E. HORTON & SON CO.



Windsor Locks, Conn., U. S. A.

Post Office Box 222.

—ONLY MANUFACTURERS OF THE—

Horton Lathe Chuck

More durable accurate, stronger and lighter than any chuck in market. The only chuck made using the

PATENT JAW,

Which insures perfect accuracy.

Send for Illustrated Catalogue.

WM. SELLERS & CO., Incorporated.

Engineers and Machinists, PHILADELPHIA, PA.

Improved Machine Tools for Working Iron and Steel.

SHAFTING, PULLEYS, HANGERS, Etc., for Transmitting Power.
IMPROVED SELF-ADJUSTING INJECTOR OF 1876, started, stopped and regulated as to capacity by one lever.

FIXED NOZZLE AUTOMATIC INJECTOR OF 1885.

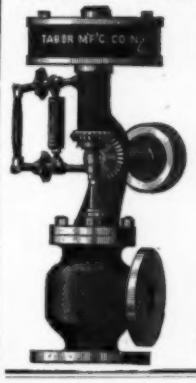
Either a lifter or non-lifter; no extra valves or fittings required, tubes can be removed without disturbing pipe connections; is perfectly automatic in its action; requires no especial manipulation to operate it.

Descriptive pamphlets and prices furnished on application to

Philadelphia Office, or to New York Office, 79 Liberty Street.

The TABOR MANUFACTURING CO.

—SOLE MANUFACTURERS OF—



TABOR STEAM ENGINE GOVERNOR

Patented April, 1883, and December, 1884.

WILL REGULATE AS CLOSELY AS THE BEST AUTOMATIC CUT-OFF ENGINE.

Perfectly adapted to every type of Stationary and Portable Engine. Fitted with speed adjuster, Sawyer's Lever and Automatic Safety Stop.

SIMPLE, SENSITIVE AND DURABLE.

All Parts Interchangeable.

SEND FOR SPECIAL CIRCULARS AND PRICE LISTS.

OFFICE AND SALESROOM,

113 Liberty Street, - - - New York City.

BACON

Winding Engines, Furnace Hoists, Mine Hoists.

(With or without Boilers.)

"Mining Plants," Concentrating Works, and Dredging Machinery Furnished Complete.

COPELAND & BACON,

85 Liberty Street, New York.

FAIRBANKS & CO., Agents, Philadelphia, Pa. Pittsburgh, Pa. Buffalo, N. Y.

References: Croton Magnetic Iron Mines, Brewster's, N. Y. Crown Point Iron Co., Crown Point, N. Y. Belvidere Iron Co., 52 Broadway, N. Y. Sea Island Chemical Co., Beaufort, S. C.

"STEAM"

A valuable book for every Steam user and Engineer, published for FREE DISTRIBUTION by

THE BABCOCK & WILCOX CO.,

Manufacturers of

WATER-TUBE BOILERS,

107 Hope St., GLASGOW. **39 Cortlandt St., NEW YORK.**

THE MIDVALE STEEL CO.

TIRES and AXLES

OF EVERY DESCRIPTION.

—FOOT— AND MACHINERY STEEL

SPRING AND GUN STEEL.

CRUCIBLE AND OPEN HEARTH STEEL.

Works & Main Office: **Nicetown, Philadelphia, Pa.**

BRANCH OFFICE: **333 Walnut St., Philadelphia, Pa.**

MEECH & CO., Man

FOR THE REDU

Refractory Ores and Smel

And the CONCENTRATING and SAVIN

CLEVELAN

Gold Ores in the South Assay from S of Extraction by the Meech Proce

Have you any Mineral Territory? Then form a Compa ***MEECH*** *process—the most economical of all method Refractory Ores. Will successfully extract 90 per cent Sulphurets, Sulphates, Sulphides, Chlorides,*

We desire Business Correspondents in EVERY MINI

TO MINE OV

We are now building a complete Mill to be erected in Cleve wishing to buy machinery. Shipments should be plainly mark of shipper. Ship in lots of not less than 100, nor more than 2 practicable parties should come with ore and witness the operatio by parties without giving previous notice will be promptly worked dry milling ores, such as Sulphuret, Oxide, Chloride and Telluride.

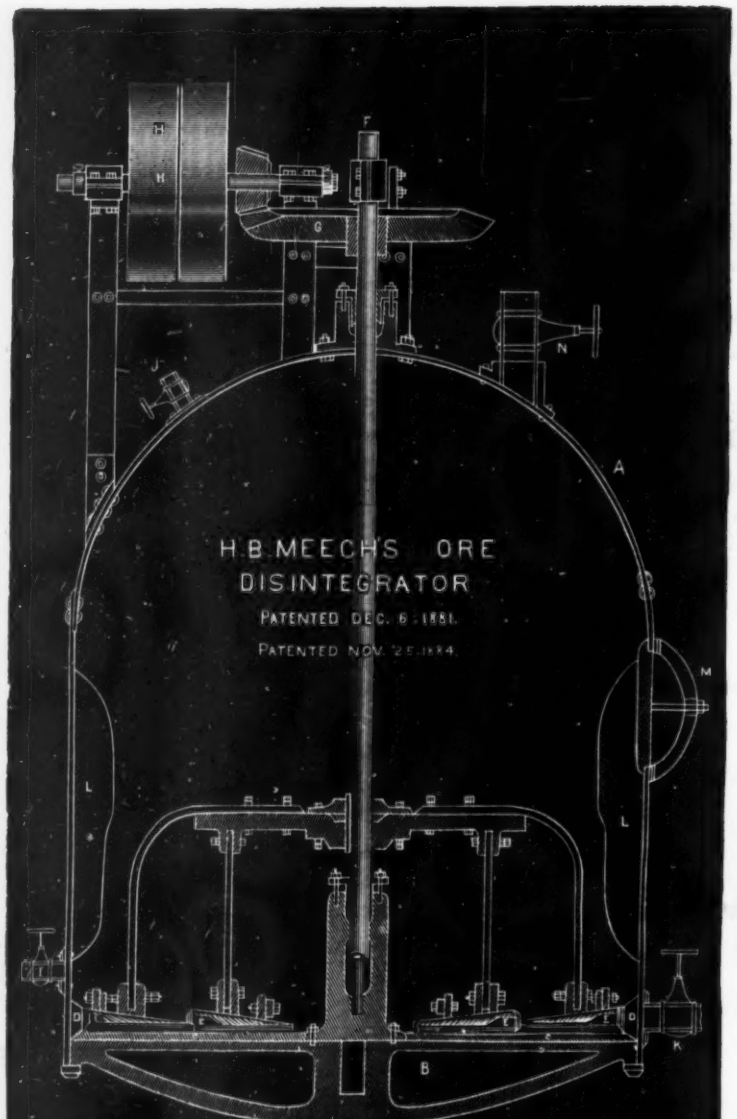


FIG. 4—THE MEECH ORE DISINTEGRATING MACHINE.

FIG. 2—MEECH PLANT OF MACHINERY, END VIEW.

The Meech Plant of Milling Machinery.

Heat, water and attrition, in combination with electricity and chemical action, are the principles upon which we base our process and machinery shown in part in the accompanying cuts.

The Meech plant of machinery set up in a building all in its proper place is shown in Figs. 1 and 2.

Fig. 1 is a front view of a full plant of machinery, with piping, shafting and pulleys all complete.

Fig. 2 is an end view of the same. A represents the Crusher, G the Rolls, B the Engines, H the Steam Boilers, X the Disintegrator, Y the Amalgamators, R the Settlers, S the Clean-up pans.

The ores are crushed and pulverized, and screened to about 40 mesh fine. About 4 tons to a batch, with the proper quantity of salt, soda, and water as may be required (according to the character of the ore to be treated) are slowly run into the Disintegrator, occupying about one hour—each Disintegrator being worked alternately so that the surplus steam may be transferred from one to the other, thereby using the steam over and over again.

There the ore is ground under a *high pressure of steam heat* for about three hours. Under this heat and electric attrition the sulphur, talc and chemical combinations will dissolve and unite with the salt and the soda, leaving the metals clean and free for amalgamation. Then the decomposed ore is let out through the 4-inch pipe into the revolving Amalgamator, requiring about 20 minutes time. Then about 200 lbs. of quicksilver are put in, the 4-inch valve closed, and the 2-inch water valve connecting the water tank above is opened to produce an internal hydrostatic pressure. At the same time the Amalgamator is revolving. The quicksilver is carried up to the top by each copper shelf and thoroughly circulated through the ore; at the same time a current of electricity is passing from the Disintegrator through the Amalgamato journal, precipitating the metal that m otherwise, on the copper plates n an am

By the *hydrostatic pressure* he amal fully accomplished in about on hour.

Then the pulp is allowed to run into out of the journal or out of the valve t balance of the time is taken to in slo the settler. There the quicksilver and ered together and settled in the bowls strained, retorted, melted and run int The clean-up pan is to make re to sa silver and amalgam that may escape the

The machinery is constructed in the durable manner conceivable; the comb the other, of the different arranged ma each machine may do its allotted part desired results. The Disintegrator is the necessary for the successful treatment of that *heat*, attrition and chemical action clean the ores, showing that the ores mu and cleansed before the metals can be am

This being true, it must be the ONLY successfully prepare and amalgamate o

Fig. 3 shows the Crusher and Pul principle of power in this Crusher is the crank motion and swinging jaws. T crush a large amount of ore per day, ma ore sufficiently fine to go into the Dis combination with a pair of rolls to take the two will crush and pulverize more o mill, and with less wear and te

The Disintegrating Machine is shown of iron and steel of sufficient strength t steam pressure of 100 pounds, the sc constructed as to grind the ore at the same ture and chemical action are having their

For full Description Write or P

Manufacturers of The MEECH MILLING MACHINERY

EDUCTION OF

elting Base Metal Ores,

AVING of the PRECIOUS METALS,

AND, OHIO.

rom $8 to $50 per ton. The cost Process is only $1.50 per ton.

Company and develop Gold and Silver Mines by the methods. The only successful process of treating per cent. of the metal from rebellious ores, such as lorides, Bromides, Oxides, Tellurides, &c.

RY MINING DISTRICT in the UNITED STATES.

OWNERS.

in Cleveland, O., for the purpose of Treating Ores for parties nly marked MEECH & CO., Cleveland, O., U. S. A., also name re than 2,000 pounds. Freights should be prepaid. Where operation. A notice of shipment is desirable, but ore brought ly worked. Do not ship Galena or smelting ores. Ship only Telluride. It matters not how refractory in nature.

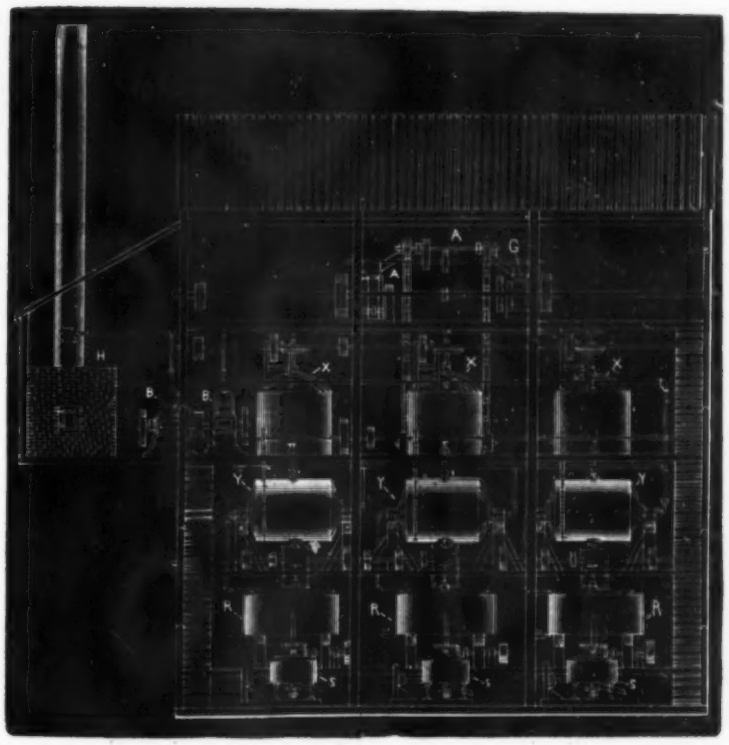


FIG. 1—MEECH PLANT OF MACHINERY, FRONT VIEW.

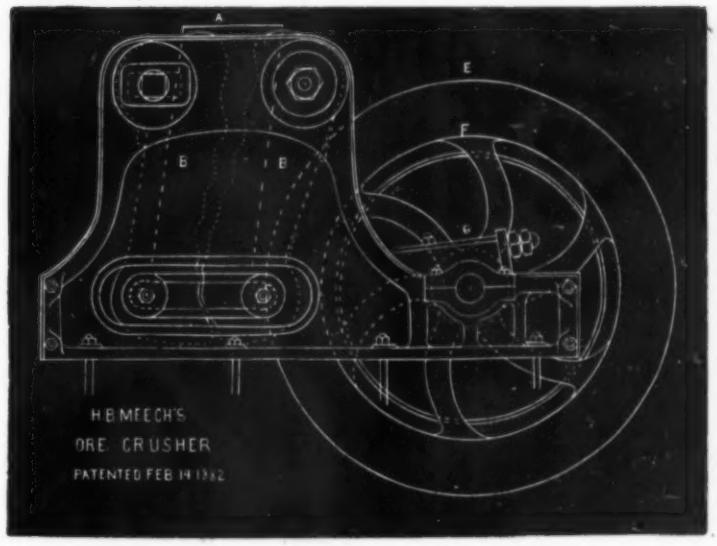


FIG. 3—THE MEECH PATENT CRUSHER AND PULVERIZER.

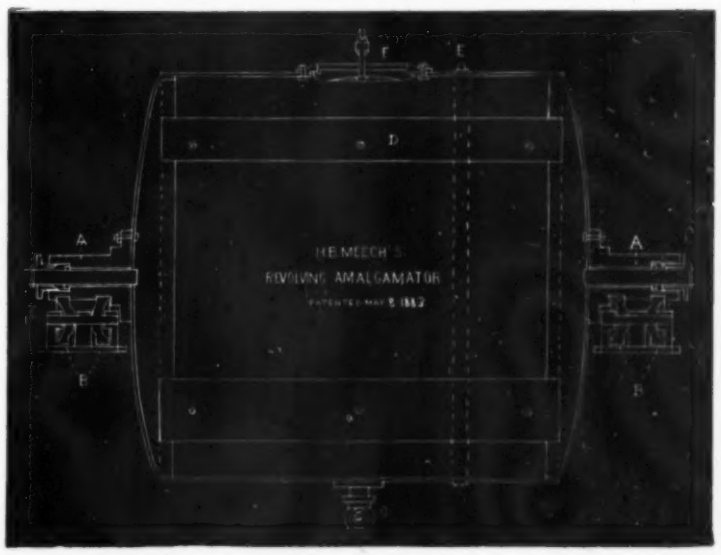


FIG. 5—THE MEECH REVOLVING AMALGAMATOR.

e Amalgamator from journal to metal that may be in solution, or lates n an amalgam state.

ure e amalgamation is succes- t on hour.

ed to run into the settler, either of the valve that admits it. The ken to in slowly running it into icks er and amalgam are gath- in e bowls, then dipped out, and run into bars as bullion. ake re to save all of the quick- ay e ape the settler.

ructe in the strongest and most ble; e combinations, one with arg ged machinery, is so that allo d part to accomplish the tegr or is the principal machine l tre ment of the ores, showing emi l action must be used to t the ores must be disintegrated tals n be amalgamated.

be e ONLY process that will amalgamate ores.

her nd Pulverizer. The first Crus er is the lever power, with ing aws. This machine will e po day, making a part of the int the Disintegrator, and, in roll to take away the pea size, ver more ore than a 20-stamp d to

hine s shown by Fig. 4, is made ent rength to hold an internal inus the square inch, and so ore at the same time the tempera- e hang their effect.

The Amalgamator shown in Fig. 5 is 5 ft. in diameter and 7 ft. long. It is hung upon its journals A, anti-friction roll boxes B, and is revolved by a chain belt, E, and sprocket wheels. The ore is blown in from the Disintegrator through a 4-inch pipe and valve, requiring about 20 minutes of time. We can amalgamate in the Disintegrator, in the revolving amalgamator, and in the settlers, thereby making the most complete amalgamation known.

The ores after passing the Disintegrator and Amalgamator become very fine.

The Following Letter will be of Interest:

OIL CITY, PA., August 4, 1886.

Messrs. Meech & Co., Cleveland, Ohio.

GENTLEMEN—After the continuous running of your Mill on our gold and silver ores at Alma, Park County, Colorado, we have demonstrated the following facts:

1. That each of your Disintegrators can be charged with from three to four tons of ore at a run.
2. That by pulverizing the ore from forty to sixty mesh fine before entering the Disintegrators, each treatment can be made in three hours.
3. That your system of treating ores, under pressure, perfectly decomposes and desulphurizes the ore, and prepares the same for perfect amalgamation.
4. That the cost of treatment will not exceed $4.00 per ton, and that our ore can be treated at a cost of $3.00 per ton.
5. That we are well satisfied that ninety per cent. can be amalgamated and extracted from our ores or any rebellious ores treated.
6. We cheerfully state that we have sold bullion from your Mill at a rate of over eighty per cent. of assay value, and by additional care, can extract, and will extract, over ninety per cent. of assay value. Yours truly,

A. J. WRIGHT, Sup't, EXCELSIOR MINING CO.

lte or Illustrated Catalogue.

SEND FOR PRICES

CYLINDER OILS

ENGINE OILS

MACHINE OILS

PAINTS, OILS, &c.

PAINTS.

Black Lamp, coach painters	₩ lb 20c
Black Lamp, ordinary	₩ lb 4@6c
Black Ivory Drop, fair	12@15c
Black Ivory Drop, best	20c
Black Paint, in oil. kegs, 6c; assorted cans, 9c	
Blue Prussian, fair to best	30@40c
Blue Prussian, fair to best, in oil	35@40c
Blue Chinese, dry	70c
Blue Ultramarine	12@25c
Brown, Spanish	1c
Brown, Van Dycke	5@15c
Green, chrome	8@15c
Green, chrome, in oil	9@12@15c
Green, Paris	good, 20c; best, 25c
Green, Paris, in oil	good, 20c; best, 25c
Iron Paint, bright red	₩ lb 2½c
Iron Paint, brown	₩ lb 1½c
Iron Paint, purple	₩ lb 3c
Iron Paint, ground in oil, bright red	₩ lb 5½c
Iron Paint, ground in oil, red	₩ lb 5c
Iron Paint, ground in oil, brown	₩ lb 4½c
Iron Paint, ground in oil, purple	₩ lb 6c
Linseed Oil, raw	44c
Single Boiled	46c
Double "	48c
Mineral Paints	2@4c
Orange Mineral	9c
Red Lead, American	6¼@7c
Red Venetian, (English) dry	$1.50 to $1.75
Red Venetian, in oil	assorted cans, 9c; kegs, 6c
Red Indian, dry	8@12c
Rose Pink	10@13c
Sienna, American, raw	4c
Sienna, Burnt	4c
Sienna, burnt, in oil	8@15c
Sienna, raw	8@15c
Umber, burnt	4@8c
Umber, burnt, in oil	8@14c
Umber, raw	3½@7½c
Umber, raw, in oil	8@14c
Vermilion, Chinese	90c
Vermilion, English	60@65c
Vermilion, American	15@18c
White Lead, American, pure dry	7 c
White Lead, American, pure in oil	6½@7 c
White, Paris, English, prime	in brls. 1½@2c
Yellow Ochre, French	$1.75
Yellow Ochre, French, in oil	asst'd cns, 9c; kegs, 6c
Yellow Ochre, American	in bbls., 1¼@1½c
Yellow Chrome	8@18
Yellow Chrome, in oil	9@12@18c
Zinc White, American, No. 1, dry	6@7c
Zinc White, American, No. 1, in oil	6½@9c
Zinc White, French dry	9@12c
Zinc White, French in oil	10@14c

OILS.

Bleached W. Sperm oil	95@1 00
Nat. " "	92@ 95
B. W. Elephant oil	70@—
" Whale oil	48@ 50
Prime Lard oil	55@ —
Extra No. 1 Lard oil	50@—
Lubricating oils	7@ 25
Miners' oil	35@ 40
W. Pressed Fish oil	30@ 32
Neatsfoot oil	50@ 75
Steam-refined Cylinder oil	30@ 40
Best Filtered " "	50@—
Signal oil	50@ —
Paraffine	12@ 20

SUNDRIES.

Benzine	₩ gal., 8@10c
Turpentine	₩ gal., 39c
Chalk	½c
Chalk, block	½c

TIN PLATES AND METALS.

TIN PLATES.

IC,	10x14, Charcoal	5 25@ 5 75
IX,	10x14, "	6 75@ 7 25
IC,	12x12, "	5 50@ 6 00
IX,	12x12, "	7 00@ 7 50
IC,	14x20, "	5 25@ 5 75
IX,	14x20, "	6 75@ 7 25
IXX,	14x20, "	8 75@— —
IXXX,	14x20, "	10 75@— —
IXXXX,	14x20, "	12 75@— —
IX,	20x28, "	14 75@— —
DC,	100, Plate "	5 00@— —
DX,	100, " "	6 75@— —
DXX,	100, " "	8 75@— —
DXXX,	100, " "	10 75@— —
IC,	10x14 & 14x20, Extra Charcoal	6 00@ 6 25
IC,	10x14 & 14x20, " " PP.	6 50@ 7 00
IX,	10x14 & 14x20, " "	7 75@ 8 50
IX,	10x14 & 14x20, " " PP.	8 50@ 9 00

ROOFING PLATES.

IC, 14x20, Charcoal Terne	4 50@ 4 75
IX, 14x20, " "	6 00@— —
IC, 20x28, " "	9 00@ 9 50
IX, 20x28, " "	12 00@— —
IC, 20x28, Extra fine quality, charcoal roofing, genuine "old style" redipped.	13 00@— —
IX, 20x28, " " "	17 00@— —

COKE PLATES.

C, 10x14, bright, "B. V." grade	4 75@ 5 00
C, 14x20, "	4 75@ 5 00
C, 10x20, Gutters	7 50@— —

BLOCK TIN.

Pig Tin	23
Bar Tin	26

LEAD.

Pig	5¼
Bar, (15 oz. bars)	6½
Sheet	8
Pipe, full coils	7

TINNERS' SOLDER.

No. 1 Refined	13
Market Half-and-Half	14½
Strictly Half-and-Half	15

BABBITT METAL.

A 1	15
No. 1 Ordinary	10
Antimony	18
Excelsior Babbitt Metal, No. 2	10
" " " " 4	9

SHEET ZINC.

In casks of 600 lbs., ₩ lb.	5¾
In smaller quantities, ₩ lb.	6½

COPPER.

Braziers' ordinary sizes, 16 oz. ₩ sq. ft. and heavy, including sheathing size ..... 17 cts. ₩ lb.

Braziers' ordinary sizes, under 16 oz. and over 12 oz. ₩ sq. ft. ..... 18 " "

All sheets, 10 and 12 oz. ₩ sq. ft. ..... 20 " "

" " under 10 " " " ..... 23 " "

Circles, 60 in. diameter and less, three cts. ₩ lb. advance over prices of Sheet Copper of the same thickness.

Circles, over 60 in. diameter, up to 84 in. diameter inclusive, four cts. ₩ lb. advance over prices of Sheet Copper of the same thickness.

Circles, over 84 in. diameter, five cts. ₩ lb. advance over prices of Sheet Copper of the same thickness.

Segment and Pattern Sheets, three cts. ₩ lb. advance over prices of sheets required to cut them from.

Cold or Hard Rolled Copper, one ct. ₩ lb. over the foregoing prices.

Our BELTING is tanned on the surfaces only; the INTERIOR is RAW HIDE.

Send for Our Valuable Book for Engineers and Belt Users. Free.

Agents in all Cities. Send for Trial Belt.

Address SHULTZ BELTING CO., St. Louis, Mo.

J. H. RATTERMANN, President. FRED BUSSE, Sec'y & Treas'r. F. G. DUERR, Vice President.

The U. S. Varnish Co.

CINCINNATI, - - - OHIO.

258 and 260 Colerain Avenue.

CHICAGO BRANCH, - - No. 47 STATE STREET.

☞ Mention this paper.

The A. A. BRAND Patent Interlocked Joint Ready made **ROOFING**

A Trial order cheap. Circulars and samples free. Address CINCINNATI ROOFING CO. 85 E. 8th Street, Cincinnati, O.

STAR ENCAUSTIC TILE CO.

(LIMITED.)

Manufacturers of all Designs and Colors of Plain and Encaustic **FLOORING TILE** for Hearths, Floors, Halls, Vestibules, Dining Rooms, Bath Rooms, Porches, Kitchens, Laundries, Banks, Hotels, Depots, &c. Works, Cor. Gist & Bluff Streets; Office, No. 90 Fourth Avenue, **Pittsburgh Pa.**

FINE Cut Work —A— SPECIALTY

PRINTING

RECORD Printing House,

Cor. Exchange Place & Commerce St.

For Sale Cheap

15 H. P. Boiler and Engine.

One 30 to 40 H. P. Locomotive Boiler.

All kinds of MACHINERY on long time.

WM. C. CODD,

306 Aliceanna St., - Baltimore, Md

STAR LUBRICATING OIL WORKS,

GEO. McMILLAN, Manager.

Office, Room No. 1, 104½ St. Clair St.

CLEVELAND, OHIO, U. S. A.

Works, C. & P. R. R. & Kinsman St.

Branch Houses:

Minneapolis, Minn., J. H. CLARK, JR., Manager.

Leavenworth, Kas. A. C. CARRUTHERS, Agent.

SPECIAL OILS

For Cotton Mills and Gins, Woolen Mills, Railroads, Tanneries, Saw and Planing Mills.

THE FINEST ENGINE OILS

Best Qualities, Lowest Prices.

WE ARE MANUFACTURERS OF and DEALERS IN

Buckeye Cylinder Oil.	Castor Machine Oil.	Lard Oil.
Champion Cylinder Oil.	Extra Lardoleum Oil.	Neatsfoot Oil.
Globe Cylinder Oil.	Sperm Machine Oil.	Miners' Oil.
Champion Engine Oil.	Golden Machine Oil.	Red Rose Electric Oil.
Buckeye Engine Oil.	Dark Oils (Summer & Winter.)	Crystal Dew Drop Oil
Prime Engine Oil.	Buckeye Harness Oil.	Head Light Oil.
Extra Engine Oil.	Sperm Signal Oil.	Naphtha.
White Castor Machine Oil.	Axle Grease.	Gasoline.

We solicit correspondence, and will send prices and samples upon application. We guarantee our OILS to be SAME AS THE SAMPLE, and in EVERY RESPECT just as represented. TRY THEM.

Literary Notes.

"BEAUTIFUL HOMES AND HOW TO BUILD THEM" is the title of a little book just issued by W. B. Judson, publisher of the Northwestern Lumberman, Chicago. It contains a series of practical building plans, comprising something like 19 separate designs for modern frame and brick dwellings, a church and a public school. They were drawn by a prominent Chicago architect and are printed in five colors, making a strikingly handsome and attractive little book. The price of the little book is only 50 cents, and besides the plans themselves, it contains much valuable technical information for both practical builders and people who desire to build homes.

MESSRS. RAND, MCNALLY & Co., 323 Broadway, New York, have just issued a Pocket Atlas of the World, which is a most valuable compendium of geographical and statistical information. It contains colored maps of each State and territory in the United States; also maps of the chief grand divisions, with complete index of every country on the globe. It is illustrated by more than 100 colored diagrams, tables, etc. Every map is accompanied by a description of the State or country represented, embracing a brief review of its history, its area, population, climate, chief characteristics, and information upon many other topics. The price is 25 cents.

DR. JOHN S. NEWBERRY, the distinguished professor of geology in Columbia College, will open the November number of the Popular Science Monthly with the story of the great ancient ice-sheet which once covered half our continent, and which, more than any other single cause, gave to it its present surface configuration. With the aid of illustrations the record left by this mighty agency of the past is very clearly interpreted for the general reader, who will obtain from the account an insight into the mode of working of nature's forces that only years of special study could afford.

TRADE NOTES.

THE advertisement of the Birmingham Soap Works, to be found elsewhere, presents a good opening for a first-class soap maker.

THE Lawrence Machine Shop, Lawrence, Mass., heretofore doing business as a firm, has been succeeded by the Lawrence Machine Co., an incorporated company composed of the parties who formed the parnership. The new company will carry on the manufacture of centrifugal pumping machines as before. The general offices will be in Boston and the works at Lawrence. The officers of the company are Joseph P. Battles, president; Wm. O. Webber, vice-president, and A. A. Brooks, treasurer.

THE Western Steel Co., St. Louis, Mo., six months ago gave an order for a Hyatt filter of 150,000 gallons daily capacity. It did the work required with perfect satisfaction, and the company have given another order for an additional plant of 500,000 gallons. The saving they effect by using pure water is reported to be thousands of dollars per month. The Union Steel Co., of Chicago, Ill., use a Hyatt filter to purify the abominable Chicago river water for their steam boilers with great success. G. M. Munger & Co., a very large laundry firm, with extensive laundries in Chicago, St. Louis and Kansas City, recently duplicated their original order by purchasing a 40,000 gallon filter. Armour & Co., the great Kansas City packers; Deering & Co., agricultural machinery; the Chicago Sugar Refining Co.; N. K. Fairbanks & Co., lard oil refiners, Chicago, Ill.; the Standard Steel Co., Philadelphia, Pa.; the Joliet Steel Co., Joliet, Ill., and the Pennsylvania Lead Co., Pittsburgh, Pa., are all recent purchasers of the Hyatt filters. Several Southern cities are looking into the merits of this excellent water-purifying system, and an agent from Europe recently examined it, with a view to adopting it to purify the supply of Buda Pesth, taken from the Danube river.

ROBT. W. WINSTON, Oxford, N. C., wants catalogue showing designs of iron fencing and gate for front yard.

A PRICE-LIST of shafting, couplings, pulleys, belting, etc., has been issued by Mr. Wm. C. Codd, of Baltimore. A list of goods handled by Mr. Codd is also given, which will prove of value to buyers of machinery and mill supplies. This price-list will be sent upon application.

Important.

When visiting New York city, save baggage express and carriage hire, and stop at the Grand Union Hotel, opposite Grand Central Central Depot.

600 handsomely furnished rooms at $1 and upwards per day. European plan. Elevators and all modern conveniences.

Restaurants supplied with the best. Horse cars, stages and elevated railroads to all depots. You can live better for less money at the Grand Union Hotel than any other first-class hotel in the city. †

ONE of the best hotels in Boston for business travelers or pleasure tourists is the American House, centrally and conveniently located and most excellently kept. ‡

List of Patents.

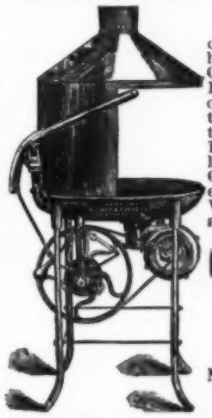
The following Patents were granted to citizens of the Southern States, bearing date Oct. 5, 1886. Reported expressly for this paper by Louis Bagger & Co., Mechanical Experts and Solicitors of Patents, Washington, D. C.

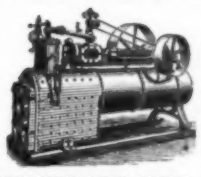
Adams, W. H., Fort McIntosh, Laredo, Tex. Revolving target.....350,227
Beazley, J. O., and H. S. Brewington, Baltimore, Md. Mills pail strainer.....350,183
Benninger, J. A., Louisville, Ky. System for preventing vessels from sinking.....350,184
Brown, A. R., and W. H. Bell, Simpsonville, Ky. Pump.....350,108
Caldwell, B. F., Wheeling, W. Va. Packing sheet-metal roofing. (2 patents.).....350,343
Corpening, E. M., Bridgeport, W. Va. Fence.350,119
Crump, W. E., Jr., Sealy, Tex. Cork-extractor.....350,350
Cutter, M. A., Galveston, Tex. Car-window lock.....350,418
Dillon, J. W., Catlettsburg, Ky. Staple-driving implement.....350,420
Duke, E. W., Jackson, Ga. Cotton-planter..350,233
Edge, J. S., Bryan, Tex. Machine for building and rerolling wire fences.....350,423
Fountian, H. S., Marlin, Tex. Wash-boiler..350,356
Goodwin, J. E., Memphis, Tenn. Machine for making excelsior and material for wood pulp for paper-making.....350,358
Headen, Minnis, Christiansburg, Va. Foot-power hammer.....350,363
Heath, James, Richmond, Va. Tooth-brush.350,306
Hodsden, W. W., Smithfield, Va. Barrel-cover.....350,247
Lay, William, Omaha, Tex. Motor.....350,257
Lee, P. A., Coushatta, La. Fertilizer-distributer.....350,258
Lowry, T. P., Bryan, Tex. Cotton-planter..350,311
Medling, F. M., Rutherford Depot, Tenn. Headstall for stock.....350,380
Miles, S. D. G., Trigonia, Tenn. Egg-case..350,442
Potter, E. B., Paducah, Ky. Apparatus for vaporizing liquids.....350,445
Sage, J. C., Gainesville, Ga. Ditching machine.....350,271
Shunk, Benjamin, Jacksonville, Fla. Hat-cover and neck-shield.....350,398
Smith, H. M., Richmond, Va. Machine for cleaning peanuts.....350,326
Spears, J. A., near Thomasville, Ga. Trace and rein carrier for harness.....350,166
Taylor, J. H., Greenville, S. C. Tether.....350,277
Wetherill, C. P., Woodville, Miss. Srew-propeller.....350,278

PATENTS
FOR INVENTIONS
(American and Foreign,) Trade Marks, etc., procured through the agency of
Arthur C. Fraser & Co.
TEMPLE COURT, NEW YORK CITY.
(Entrance 5-7 Beekman St.) Hand-book of information sent free to any address.

"HOW TO KEEP BOILERS CLEAN"
And Prevent SOALING, FOAMING, BURNING
Price $75.00. Removes Lime Oil, Magnesia, without use of Compounds.

Hotchkiss Mechanical Boiler Cleaner,
Illustrated in an eighty-eight page book, which will be mailed FREE, to any address, by JAS I. HOTCHKISS, 93 JOHN ST., N. Y. Beware of Infringers.

THE CHAMPION LEVER
BLOWERS AND FORGES
Are the Leaders of the World.

An entirely novel construction. "They have no equal." No Cog Wheels, Ratchets, Pawls, Gum Balls or other Friction Devices to wear out in a short time. Easy Motion, Powerful Blast. Noiseless and Durable. Guaranteed to give entire satisfaction. Write for catalogue and prices.
CHAMPION BLOWER & FORGE CO.,
No. 22 to 36 East James
LANCASTER, PA.

SHAW & DAVIN,
BIRMINGHAM, ALA.
ENGINES BOILERS

COMPLETE GIN AND MILL OUTFITS
—A SPECIALTY.—
Lubricating Oils, Mill and Engineers' Supplies. Cotton, Grain, Saw-Mill, and Labor-Saving Machinery. Shafting, Pulleys, Belting, Saws, Emery-Wheels, Governors, Pumps, Inspirators, &c. Large stock to select from. Prices low, goods guaranteed. Write for circulars.

C. L. JACKSON & CO.
No. 14 W. German Street,
(4th door from Charles.)
BALTIMORE, MD.
AGENTS FOR AND REPRESENTING
AKRON IRON CO.—Pat. Calendered Iron and Steel Shafting.
W. F. & JOHN BARNES CO.—Lathes, Drills, Light Machinery.
STAR TOOL CO.—Lathes and Machine Tools.
GEO. C. TAFT.—Drill Presses.
"DIAMOND" EMERY WHEEL MACHINERY CO.
GRANT CORUNDUM WHEEL CO.
EMPIRE PORTABLE FORGE CO.
DELAMATER IRON WORKS.—Shears, Punches, &c.
REYNOLDS & CO.—Set, Cap and Machine Screws.
HUYETT & SMITH MANFG. CO.—Exhaust Fans and Blowers.
BAXTER STEAM ENGINES.—2, 4, 6, 8 and 10 Horse-Power.
GARDNER VERTICAL ENGINES.—1 to 25 Horse-Power.
SHAFTING IN STOCK:
$1\frac{3}{16}$, $1\frac{5}{16}$, $1\frac{7}{16}$, $1\frac{11}{16}$, $1\frac{15}{16}$, $2\frac{3}{16}$.
Pulleys, Hangers and Belting.

ENGRAVING DIRECT FROM PHOTOGRAPH.
NO DRAWING REQUIRED.
NO HAND WORK NECESSARY.
SEND COPY FOR ESTIMATE
CHEAP, ARTISTIC
CROSSCUP & WEST ENG. CO.
807 FILBERT ST. PHILA. PA.

A. J. LYMAN,
Member of the National Association of Real Estate Dealers, U. S. A.)
Real Estate & Loan Broker,
ASHEVILLE, N. C.
Office in Court-House Building.
Special attention paid to placing loans on the best real estate security in city or country at 8 per cent. per annum.
REFERENCES—HON. WM. R. COX, Washington, D. C.; HON. WALDO HUTCHINS, New York City; WM. HAMERSLEY, ESQ., Hartford, Conn.

VALUABLE COAL AND IRON
Lands For Sale.
Fifty thousand acres of carefully selected coal lands, located in the Black Warrior river coal fields of Alabama, beginning about 8 miles from Tuskaloosa, on both sides of the Black Warrior river, which is now navigable from Tuskaloosa to Mobile, and which the U. S. government is now engaged in making navigable to and above these lands. Valuable veins of iron ore have been found on these lands. The Georgia Pacific Railroad is now being built to run through the lands, and the new Memphis & Birmingham is being built skirting them.
The coal is of excellent quality, and in good, workable seams.
The lands are well timbered with yellow pine, oak, hickory, &c.
These lands are conceded to be among the best in the State, and are offered at a price that makes them very desirable, either for development or investment. The owners will sell a controlling interest, but wish to retain at least a fourth interest.
For further information, maps, &c., call on or address
GEO. E. RIGHTER,
Office of the Griffin Manufacturing Company,
92 Liberty St., NEW YORK.

Splendid Tobacco Farm
FOR SALE
IN NORTH CAROLINA.
Sixty acres of fine tobacco land with splendid two story house and beautiful yard, fronting about 350 feet on the main street, in a town of 150 to 175 population, 15 miles from a city of 15,000 inhabitants and one of 5,000. The house is 300 yards from depot. There is a large stable, carriage house, corn crib and other out-houses, including 3 tobacco barns and 2 tenant houses. Good well o freestone water; 400 peach and apple trees, and 425 grape vines, all in full bearing. Splendid climate; healthy location. The buildings alone cost $3,500. Will take $2,500 cash. Special reasons for selling. Address J. P. R., care MANUFACTURERS' RECORD, Baltimore.

HEALTH
for weak lungs and throats can be secured in the delightful winter climate of Western North Carolina. At Tryon, Polk county, N. C., a well-known winter resort, a comfortable well furnished 8-room house can be rented for the winter. Address, Mrs. M. M. Cureton, Tryon City, N. C.
[The editor of this paper can give any information desired about Tryon and its climate.]

TO ADVERTISERS!
For acheck of $20 we will print a ten line advertisement in One Million issues of leading American Newspapers and complete the work within ten days. This is at the rate of only one-fifth of a cent a line, for 1,000 Circulation! The advertisement will appear in but a single issue of any paper, and consequently will be placed before One Million different newspaper purchasers;—or FIVE MILLION READERS, if it is true, as is sometimes stated, that every newspaper is looked at by five persons on an average. Ten lines will accommodate about seventy-five words. Address with copy of advertisement and check,
GEO. P. ROWELL & CO., 10 SPRUCE ST., N. Y.

THE FAIRY TRICYCLE.

Easy. Graceful. Elegant.
Has no equal for health of motion or ladies' use. Durable and cheap; runs the easiest; no chains or gearing to catch or tear clothing. A good hill climber. For adults, invalids and children. Agents wanted.
THE FAY MFG. CO., Elyria, O.

THE MARKETS.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, Oct. 13, 1886.

In manufacturing lines throughout the country the volume of business is very large, and the prospects are regarded as altogether favorable for the future, but as yet the margin of profits continues small. Railroads are crowded with business, and find themselves compelled to largely increase their rolling stock, which is a pretty good indication of the activity in trade generally.

There has been an advance of about 1-10 of a cent in hoop iron, but the new quotations are not made public yet. The market is fairly active and firm, and we quote as before, viz:

Ref. Bar Iron, 1 to 6x⅜ to 1	₱ lb.	1.90@ 2.10c
" " 1 to 4½x1½ to 1	"	1.90@ 2.10c
" " ½ to 2, round and square	"	1.90@ 2.10c
Hoop Iron, 1½ wide and upward	"	2.40@ 2¾c
Band Iron, from 1½ to 6 in. wide	"	2.35@ 2.65c
Horseshoe Iron	"	2½@ 3 c
Norway Nail Rods	"	4¾@ 5¼c
Black Diamond Cast Steel	"	8½@ 10 c
Machinery Steel	"	3 @ 4½c
Spring Steel	"	3¾@ 4 c
Common Horse Nails	"	8 @ 9 c
Railroad Spikes, 5½x9-16	"	2½@ 3 c
Steel Boiler Plate	"	3½@ 3⅝c
Iron Boiler Plate	"	2¾@ 4 c
Boiler Tubes		47½% off list

The demand for pig iron continues about equal to the production, the consumption being sufficiently large to prevent any accumulation of stocks. Old rails are wanted, and are held firmly at $21@22, the latter for good stock for immediate delivery.

Baltimore Charcoal Wheel Iron (all Baltimore ore)	$25 00@26 00
Virginia C. B. Charcoal Wheel Iron	25 00@26 00
Anthracite, No. 1	18 00@19 00
" " 2	16 00@17 00
" " 3	15 00@16 00
" Mottled and White	13 00@14 00
Old Rails	20 50@21 00
Old Steel Rails	19 00@20 00
No. 1 Wrought Scrap	19 00@20 00
Old Car Wheels	15 00@16 00

HARDWARE.

In the hardware trade business continues about the same, with no change of importance to note in prices.

Nails are still quoted nominally at $2.10, but sales are being made at about $2.

Cincinnati Iron Market Report

Specially reported by ROGERS, BROWN & Co., Pig Iron Commission.

CINCINNATI, October 11, 1886.

The features described in last week's report have continued during the week under review. Extraordinary demand, very heavy transactions, advancing prices and some considerable feverishness have marked the course of trading. At least a score of 500 and 1,000-ton orders have been booked by Cincinnati dealers during the week, nearly all of this for forward delivery, as but a small fraction of it could have been supplied from present stock. As an illustration of the condition of Southern order-books, it can be authoritatively stated that one leading company has over 25,000 tons of orders booked ahead of make, and on Friday had before it favorable offers for 10,000 tons more. Another company, in the Birminghom district, has 17,000 tons sold; several others in the South from 12,000 to 15,000 tons. These are coke furnaces. Of the car wheel furnaces, one Alabama company is reported to have 17,000 tons sold ahead. One Tennessee company has about 9,000 tons of orders booked; the other charcoal furnaces are sold an average of two to three months ahead. In the North it is not customary to take forward contracts to so great an extent, and, while stocks are well cleaned up, there is no such large proportion of forward orders. There is still an absence of speculative buying, except as customers anticipate their wants. The disposition of large makers is not to encourage a rapid and unhealthy advance, and this motive has led to some large forward sales at good prices that otherwise would not have beea made. The word "boom" is deprecated among conservative makers as offensive, both in name and practice. The new Tennessee and Pratt combination begins immediately the erection of several new furnaces at Birmingham, but it will be 12 months before any of them will be in operation, meantime the company will operate five furnaces. The furnaces in the Mahoning and Shenango valleys are somewhat unsettled in policies, owing to unprecedented and still advancing freights on Lake ore. Prices of pig have not advanced so much as further South, but the necessity is realized for a considerable advance to cover increased cost. Old rails and old wheels rule somewhat higher, but transactions have been light. We carefully revise our quotations, which are for cash f. o. b. Cincinnati:

HOT-BLAST FOUNDRY.		
Ohio and Southern Strong Coke No. 1	$18 00@19 00	
" " " " No. 2	16 50@17 50	
" " " " No. 3	16 00@17 00	
Ohio Soft Stonecoal, No. 1	17 50@18 00	
Ohio Soft Stonecoal, No. 2	16 50@17 00	
Mahoning and Shenango Valley Coke, No. 1	20 00@21 00	
CHARCOAL IRON.		
Hanging Rock, No. 1	$20 00@21 00	
" " No. 2	19 00@20 00	
Tennessee and Alabama, No. 1	19 00@20 00	
" " No. 2	17 50@18 50	
FORGE.		
Strong Neutral Coke	$15 50@16 00	
Mottled " "	13 50@14 50	
Cold Short	15 00@15 50	
CAR WHEEL AND MALLEABLE.		
Southern Car-Wheel Iron	22 00@24 00	
Hanging Rock C. B.	26 00@27 00	
" W. B.	21 00@22 00	
Lake Superior Malleable	22 00@23 00	

LATER.—Since the above report was written we have advice by wire of one sale of 5,000 tons No. 2 foundry and No. 1 mill Southern coke iron on the basis of $17.00 and $16.00 cash at Cincinnati. This sale fixes the market for further business on that basis.

Specially reported by E. L. HARPER & Co.

CINCINNATI, October 11, 1886.

Market very firm and active. We quote for cash on cars or wharf here:

		Cash.
FOUNDRY.		
Hanging Rock Charcoal, No. 1	$20 00@20 50	
" " " " 2	19 00@19 50	
Southern Charcoal " 1	18 75@19 75	
" " " 2	17 75@18 75	
Strong Neutral Coke, " 1	16 50@17 00	
" " " " 2	16 00@16 50	
American Scotch, " 1	17 00@17 50	
GREY FORGE.		
Neutral Coke	14 50@15 50	
Cold Short	14 50@15 00	
CAR WHEEL AND MALLEABLE.		
Hanging Rock, strictly cold blast	25 00@26 00	
Hanging Rock, strictly warm blast	21 00@21 50	
"Cranberry," N. Carolina Warm Blast.	— —@23 50	
Amherst and Virginia Warm Blast	20 00@21 00	
Lake Superior Charcoal, all grades	23 00@24 00	

Louisville Iron Market.

Specially reported by GEO. H. HULL & Co., Commission Merchants for the sale of Hot and Cold Blast Pig Iron.

LOUISVILLE, KY., October 11, 1886.

The market continues to show an improvement in tone of prices. Furnaces have sold actively, and in some cases are so far sold ahead that they are declining to sell for delivery this year, and for next year's delivery are holding at 50 cents per ton higher. Buyers here have not taken hold as vigorously as in some other sections. Many of them would book orders for future delivery at current prices, but are not willing to pay the additional price asked. We quote for cash in round lots as below:

PIG IRON.	
Southern Coke, No. 1 Foundry	$17 00@18 00
" " " 2 "	16 00@17 00
" " " 2½ "	14 50@15 50
Hanging Rock Coke, No. 1 Foundry	17 00@18 00
" " Charc'l, " "	19 00@21 00
Southern Charcoal, No. 1 Foundry	17 00@19 00
Silver Gray, different grades	14 50@15 50
Southern Coke, No. 1 Mill, Neutral	14 50@15 50
" " " 2 " "	13 50@14 50
" " " 1 " Cold Short.	13 50@14 00
Southern Charcoal, No. 1 Mill	16 00@17 00
White and Mottled, different grades	12 00@13 00
Southern Car Wheel standard brands	22 00@24 00
" " other brands	19 00@21 00
Hanging Rock Cold Blast	23 00@25 00
" " Warm "	19 00@21 00

Specially reported by W. B. BELKNAP & Co., Nails Wire, Iron, Hardware, Carriage and Wagon Goods.

LOUISVILLE, KY., October 11, 1886.

Our report must be much the same as last week. Trade continues up to its full volume, and, while there is no excitement in any quarter, there is promise of a steady demand for some time to come.

Bar iron.—Is still selling freely, and prices maintained at the figures which have been current now for two or three weeks.

Steel.—We read and hear much about the scarcity of steel stock and the latter ore on the docks at Cleveland, in regard to rates of freight from Lake Superior, yet with all that but few of the products of steel have advanced in price; it seems hardly consistent with the assertion made by the sellers.

Nails.—Are coming forward, but slowly. Local stocks are much reduced, and there seems to be no tendency to advance prices further, and but little inclination on the buyers' part to place orders at the full price to-day.

Wire.—Is still extremely demoralized, There seems to be no such thing as getting an advance on either plain or barbed, though both are selling in fair quantities. We quote:

Bar Iron	1 80 @1 90
Cresent Steel	10 @ 12
Plow Steel slabs	2 50 @2 75
No. 27 Sheet	2 90 @3 10
Galvanized sheet, best	50 @ 55%
Galvanized Iowa barb wire	4 50 @4 75
Burden Shoes	4 10 @4 15
Juniata Shoes	3 75 @3 85
Carriage Bolts	75& 5%
Steel nails	2 25 @2 35
Iron Nails	2 15 @2 25
Rope, Sisal	9 @ 9½
Rope, Manilla	12½@ 13
Screws, American Screw Co's list	75 @ 10%
Axes	6 75 @7 00
Cross cut saws, wide, per foot	26 @33cts.
Cross cut saws, narrow, per foot	21 @23cts.

With concessions to large or wholesale buyers.

Chicago Iron Market.

Specially reported by ROGERS, BROWN & Co. W. W. BACKMAN, Resident Agent.

CHICAGO, October 11, 1886.

The Chicago market has begun to sympathize very actively in the past week with the improved spirit reported from other markets. This field being so closely contested by all producing districts is usually slow to respond to reports of better business elsewhere. A number of the largest buyers have been endeavoring to place orders for deliveries extending from 3 to 9 months ahead. Some large transactions have resulted, aggregating perhaps 12,000 tons. The prices realized were better than smaller orders have been taken at through the last ten days, and represent probably the highest point reached in this market for nearly two years. These transactions have naturally stimulated smaller buyers to active enquiries, and at the close of the week the market is still advancing with numerous sales. There still seems to be a complete absence of any speculative influence beyond the provision by actual consumers for future wants, and, for these reasons and others, it is thought that the present advance is on a much more sure basis than that of last December. All that has been said of scarcity of desirable foundry grades is fully confirmed by investigation at the different iron centers. Our quotations are for cash f. o. b. cars Chicago:

CHARCOAL FOUNDRY.	
Lake Superior	$19 00@20 00
Southern	19 50@21 00
Hanging Rock	21 00@22 00
COKE AND STONE COAL FOUNDRY.	
Ohio (Hanging Rock) Softeners No. 1	18 50@19 50
" Blackband " "	19 00@20 50
" Jackson county " "	18 50@19 00
" Lake ore and cinder " "	18 00@19 00
Southern Coke, No. 2	17 75@18 50
" " No. 2½	17 25@18 00
CAR WHEEL AND MALLEABLE.	
Lake Superior	19 00@21 00
Standard Southern	23 00@24 00
Hanging Rock, cold blast	28 00@— —
" " warm blast	20 00@22 00
OLD MATERIALS.	
Old Rail, American	23 00@— —
Old Wheels	17 00@18 00

St. Louis Iron Market.

Specially reported by ROGERS, BROWN & Co., Gay Building, 204 N. 3rd street, St. Louis. W. H. SHIELDS, Manager.

ST. LOUIS, October 11, 1886.

There has been a smaller volume of business in this market the past week, growing out of the unwillingness of local buyers to keep up with the rapidly advancing views of leading sellers. Some considerable lots have changed hands, all at full prices. There has not been much contracting ahead, however, buyers seeming to think that the little spurt of activity will perhaps subside, and give them a better chance later. Meantime the Southern and Ohio furnaces are booking orders, covering their full capacity for long periods ahead. One Southern company has over 24,000 tons on its order book in advance of make, while one Southern charcoal furnace (that figures prominently in this market) reports its product sold until next May. Business continues good with nearly all of the foundries, and all car works tributary to this market, and the average consumption of pig metal is much larger than it has been for a long time. The scarcity of cars in the Connellsville district is causing considerable inconvenience; cars are also very scarce for shipment from this point west. We quote for cash f. o. b. cars St. Louis:

HOT-BLAST CHARCOAL.	
Missouri	$18 00@19 00
Southern	18 00@20 00
Ohio	— —@— —
COKE AND COAL.	
Missouri	— —@— —
Southern No. 1	17 50@18 50
Southern No. 2	17 00@18 00
Southern No. 2½	— —@— —
Ohio Softeners	18 00@22 00
MILL IRONS.	
Missouri	16 50@17 50
Southern No. 1	16 00@17 00
Southern No. 2	15 00@16 00
CAR-WHEEL AND MALLEABLE IRON.	
Southern	20 00@25 00
Lake Superior	22 00@25 00
MISCELLANEOUS.	
Old Wheels	16 50@17 00
Old Rails	21 00@22 00
Connellsville Coke, East St. Louis	— —@ 5 65

Chattanooga Iron Market.

Specially reported by LOWE & TUCKER, Brokers and Commission.

CHATTANOOGA, TENN., Oct. 11, 1886.

The course of general trade continues to advance in activity, and prices are gradually going up as orders are getting to be more difficult to place; in fact, it is impossible to place orders at the old figures that ruled a few weeks ago. There is a great demand for light rails, ranging from 20 to 40-pound sections, and everything in the shape of second-hand is being rapidly absorbed. Pig iron continues active, and a number of furnaces decline offers excepting at a strong advance over previous figures. The amount of freight that is now being moved by the railroads largely exceeds that of any previous year. The outlook for the future is very bright. We quote:

No. 1 Foundry	$14 50 @15 50
No. 2 Foundry	13 50 @14 00
American Scotch	13 50 @14 00
Gray Forge	12 00 @13 00
Car-Wheel Iron	23 00 @25 00
Ores, Red and Brown	1 50 @ 2 25
Furnace Coke	2 00 @ 2 30
Nails, car-load lots, 30 days	— —@— —
Bar Iron, per 100 lb	— — @ 1 75
Old Rails	18 00 @19 00
Old Wheels	13 00 @— —
Wrought Scrap, No. 1	— — @— 70
" " No. 2	— — @— 50
Cotton Tie Clippings	— — @— —
Cast Scrap	— — @— —
Railroad Splices	— — @ 1 85
Railroad spikes	— — @ 2 25
Light Steel Rails, long ton	— — @— —
Barb wire—Cambria link	— — @— —
Barbed wire—four point galvanized	— @— —
Barb ware	— @— —

RICHARD P. ROTHWELL, editor of the Engineering and Mining Journal, of New York, represents some capitalists who wish to erect two iron furnaces somewhere in the South. He has been prospecting in Alabama for a good location.—American Machinist.

WANTED.—Correspondence with any party having a marine railway to dispose of. K. of L. Boiler & Machine & Repair Co., Parker L. Poindexter, secretary, Norfolk, Va.

WANTED!

A thorough SOAP MANUFACTURER to build and operate works. Written specifications, reference and salary required.

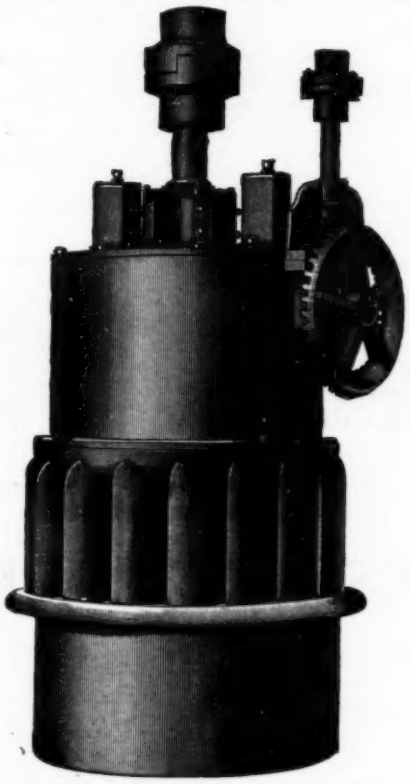
D. W. DRENNELL,
Prest. Birmingham Soap Works, - - Birmingham, Ala.

BECKER'S Patent Washing Machine Improved, approaches nearer the old method of hand-rubbing than any device yet introduced to the public. Easily worked and washes perfectly clean.

Circulars free. N. C. BAUGHMAN, York, Pa.

Please mention this paper when you write.

THE "HERCULES"



GET THE BEST.

A good Water Wheel increases the value of your whole plant.
Get the best at first and avoid the expense and delay of changing wheels.
A good wheel will serve you well for twenty years.
The best is the cheapest,—it does more work, lasts longer, and costs no more for gears and setting than a common wheel.
The HERCULES gives the most power for its size, and the highest average percentage from full to one-half gate, of any wheel ever made.

SEND FOR CATALOGUE No. 3.

HOLYOKE MACHINE CO., WORCESTER, MASS.

Wheels Now in Use in Holyoke, February 1st, 1885.

Name of Wheel.	Number.	Horse-Power Furnished.
Hercules	53	10,576
Boyden	38	5,398
American	10	825
Tyler	10	311
Hunt, Waite & Flint	7	375
Rifdon	6	440
Jonval	4	655
Swain	1	160
New American	1	65
Aousten	1	75
Victor	2	150
Total	133	19,030

EAGLE & PHENIX MANUFACTURING CO.,

COLUMBUS, GA., Feb. 25, 1885.

HOLYOKE MACHINE CO., STEPHEN HOLMAN, Treas.:

Dear Sirs—Within the past four years I have ordered four "Hercules" wheels, all of which have given the purchasers entire satisfaction. Three of the wheels are on regular duty in the Eagle & Phenix Mills. The first wheel ordered did so well that a "Hercules" wheel has been added each time a new wheel was wanted. In Eagle & Phenix Mills I supervise twenty water wheels of six different styles. The "Hercules" is by far the most durable and best made wheel in use here, and, in fact, I know of no wheel its equal, mechanically. It is all that can can be desired in economy of water. In fact, it is a strictly first-class wheel in every way, and the wheel to buy, use and depend upon. Yours truly, JOHN HILL.

CONNECTICUT RIVER PULP MILL.,

HOLYOKE MACHINE CO.: HOLYOKE MASS., November 24, 1884.

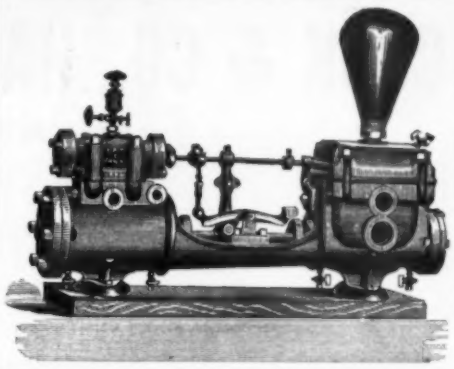
We are now using 22 "Hercules" wheels, under heads from 12 to 40 feet, and they have always given satisfaction. We have used a variety of Turbines, but where economy in the use of water is required nothing equals the "Hercules." In every respect they are first class.

D. H. & J. C. NEWTON.

GEORGE R. DICKINSON PAPER CO.,

HOLYOKE MACHINE CO.: HOLYOKE, MASS., December 17, 1884.

Gentlemen—We started our mill with three "Hercules" wheels. We raise the gates Monday morning and close them Saturday night. They have never cost us a cent for repairs nor caused us a moment's delay. We want nothing better. Yours very truly. GEORGE R. DICKINSON, Treas.

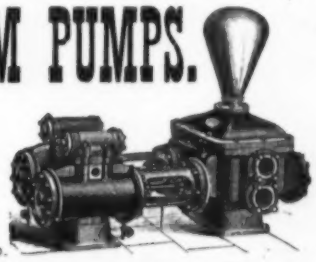


The STANDARD Steam Pumps.

From KNOWLES' PATENTS with KNOWLES' VALVE MOTION, are the STRONGEST and MOST DURABLE Pump for every duty. MINERS, BREWERS, MANUFACTURERS *IN THE SOUTH* write for Prices and Descriptive Catalogue to

WHEELER & TAPPAN,
[Sole Manufacturers,]
Office, 88 WEST LAKE STREET,
CHICAGO, Ill., U. S. A.
Works, 49, 51, & 53 N. Jefferson street.

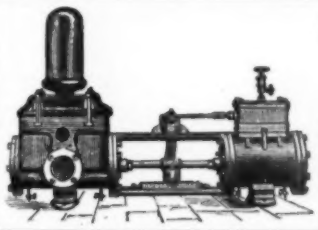
HALL DUPLEX STEAM PUMPS.



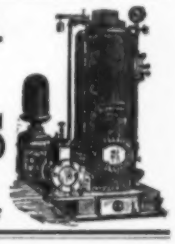
Latest and Best.
FOR ALL DUTIES.
Simple! Durable! Efficient!
SAM'L R. WAITE & CO. 40 Hughes St., BALTIMORE, MD.
Send for a Catalogue.

STEAM PUMPS

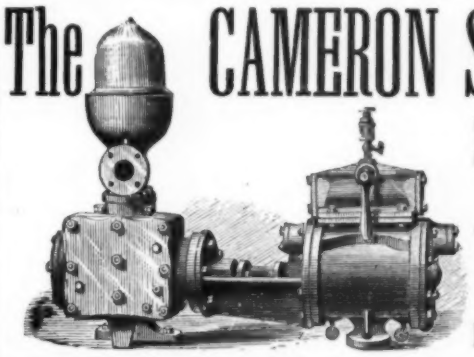
SEND FOR PRICES.
VALLEY MACHINE CO. EASTHAMPTON, MASS.



BLAKESLEE MANFG. CO.
67 WASHINGTON ST.,
DU QUOIN, ILL.
STEAM PUMPS
FOR ALL PURPOSES.
SEND FOR CATALOGUE



The CAMERON STEAM PUMP



Is the Standard of Excellence
AT HOME AND ABROAD.
THE A. S. CAMERON
Steam Pump Works,
Foot of East 23d St., New York.

CHATTANOOGA FOUNDRY & PIPE WORKS.

DAVID GILES, Prest. C. B. IBESTER, Vice-Prest. M. LLEWELLYN, Secy. and Treas.
Successors to D. GILES & CO., Chattanooga, Tenn., Manufacturers of

Also Castings and Patterns of Every Description made to order.

NEW YORK CITY WHITE LEAD WORKS

A. Marzolf, Prop.
Manufacturer of THE
ORIGINAL DOLSON WHITE LEAD.

Nos. 536, 538, & 540 West 14th Street, North River.
IMPORTER AND MANUFACTURER OF
FRENCH AND AMERICAN ZINC.
READY-MIXED PAINTS (Prepared for Immediate Use.)
PURE COLORS DRY AND IN OIL, LINSEED OIL, PUTTY, VARNISHES, JAPANS, &c.

SAML. G. B. COOK & CO., HARDWARE

MANUFACTURERS' AGENTS
63, 65, 67 and 69 German St., BALTIMORE, MD.

AGENTS FOR

American Screw Co.—Screws, Rivets, Bolts, etc.
Branford Lock Works.
Buckthorn Fence Co.—Buckthorn Fencing.
Blair Manufacturing Co.—Easy Lawn Mowers.
Boss Molasses Gates.
Buffalo Hammer Co.—Cast Steel Hammers.
C. S. Bell & Co.—Farm Bells.
Carr & Crawley.—Shelf and Saddlery Hardware.
Clark Bros. & Co.—Bolts.
H. Chapin's Sons.—Planes, Rules, Levels, etc.
John Chatillon & Son.—Spring Balances.
R. S. Clark & Co.—Hand and Sleigh Bells.
A. Field & Sons.—Tacks, Finishing and Shoe Nails
Gooch Freezer Co.—Peerless Freezers.
H. C. Hart Manufacturing Co.—Shutter and Spring Hinges, Screen Frames, &c.
Hubbard & Co.—Axe, Shovels, Hoes and Saws.
Kimball's Patent Solid Steel Shovels and Spades.
Lawson & Brenizer.—Keystone Forks.
W. T. Merserean & Co.—Stair Rods, Dog Collars, &c.
Nicholson File Co.
Peck Bros. & Co.—Brass Cocks.
Patton Manufacturing Co.—Enameled and Finished Stoneware, &c.
Penfield, Block & Co.—Tackle Blocks.
Harvey W. Peace Co.—Hand, Rip and Panel Saws.
H. W. Reed—Brick and Plastering Trowels, Shoe Knives, &c.
Scott Manufactnring Co.—Peach and Apple Parers, Ice Creepers, &c
Henry Seymour Cutlery Co.—Seymour's and Massachusett Shears.
B. Seitz.—Root Hames.
Underhill Edge Tool Co.—Hatchets, Adzes, &c.
Walker Horse Shoe Co.—Patent Horse and Mule Shoes.
R. Wallace & Son, Manufacturers.—Plated Ware.
Wheeling Hinge Co.—Wrought Goods.
Woodruff, Miller & Co.—Ox Shoes.
J. W. Williams & Son.—Thimble Skeins.
Zimmerman Shutter Fasteners.

BUFFALO HAMMER CO., Buffalo, N. Y., U. S. A.,

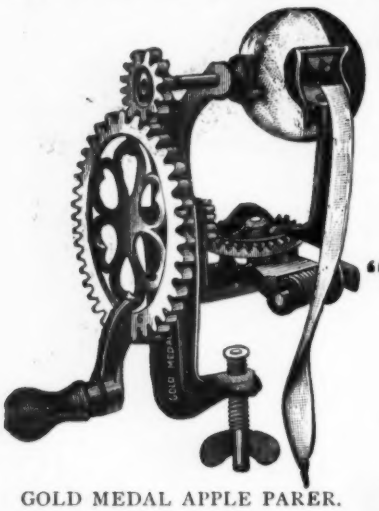
Manufacturers of a full line of

Solid Cast Steel Hammers, Sledges, Mauls,

RAILROAD TRACK TOOLS, &c.

Every Hammer or Tool having our name is fully warranted. Catalogues and discounts sent on application.

Scott's Rotary Knife Peach Parer



GOLD MEDAL APPLE PARER.

THE ONLY PEACH PARER, THE BEST APPLE PARER.

Made in Two Sizes: "FAMILY" and "MAMMOTH."

—ALSO—

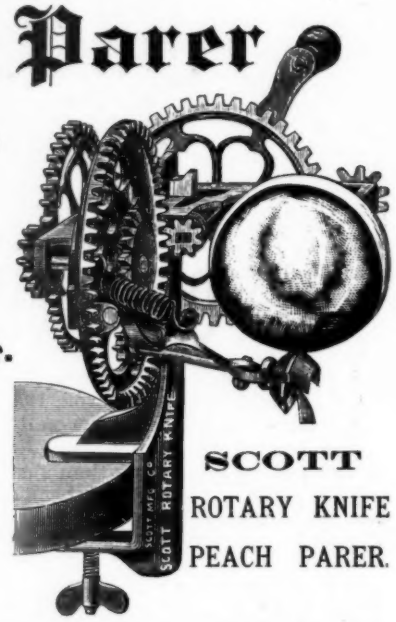
"IMPROVED VICTOR" Apple Parer, Corer and Slicer.

"ORIOLE" Apple Parer, Corer and Slicer.

GOLD MEDAL APPLE PARER.

"UNIVERSAL" and "NEW IDEA" Can Openers.

SCOTT MANFG. CO., Baltimore, Md.



SCOTT
ROTARY KNIFE
PEACH PARER.

BAGNALL & LOUD BLOCK CO. BOSTON, MASS.

Largest Manufacturers of Tackle Blocks in the World.

Manufacturers of the Latest Improved Self-Adjusting ROLLER BUSHED and GENUINE METALINE BUSHED and Iron Bushed Rope and Iron Strapped

TACKLE BLOCKS.

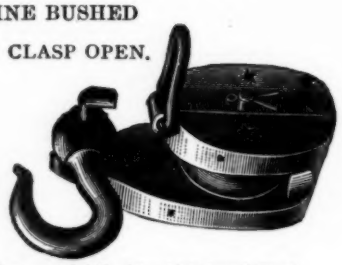
Improved Self-Adjusting Roller Bushed Iron Sheave.

Send for the Celebrated STAR BRAND.

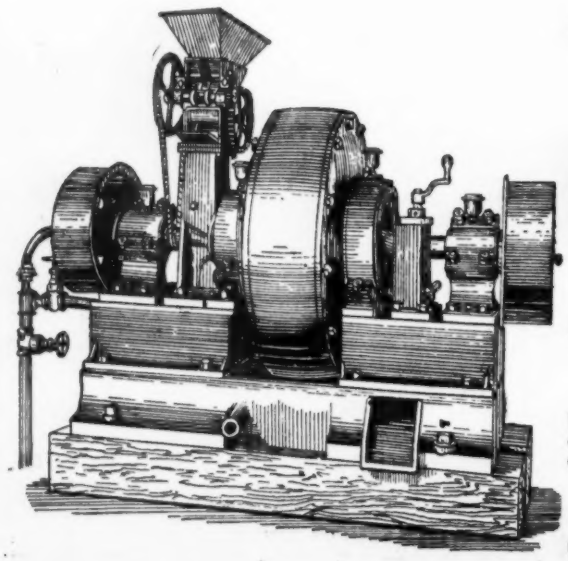
Improved Harcourt Patent Block.

Send for Catalogue No. 5.

CLASP OPEN.



Improved Self-Locking Link Snatch Block.



A Phosphate Mill that has Come to Stay.

WARING'S Centrifugal Pulverator

Manufactured by the DE LAMATER IRON WORKS.

Fully Protected by United States and Foreign Patents. Infringers will be Prosecuted.

A FEW OF THE ADVANTAGES OF THIS MILL:

The fineness of product is easily regulated without the use of screensor bolting cloths. No material is lost by escaping into the mill room. No re-pulverizing required. The Pulverator weighs 4,200 pounds and requires only ten horse power. Will give a product of 3,000 pounds an hour, pulverized to 80 or 150 mesh. The wear comes upon parts easily replaceable and inexpensive. For particulars address,

J. B. WARING & SONS, 106 and 108 Liberty St., NEW YORK.

HARDWARE.

Baltimore WHOLESALE Prices.

ANVILS.

Eagle and Vulcan.....℔ lb. 10 c. dis 20%
Wright's.....9¾c
Armitage's Mouse Hole.....8½c
Trenton.....10½c
Wilkinson's.....10½c

AUGERS AND BITS.

Conn. Valley Mfg. Co.....} extra, 60&10 %
Douglass Mfg. Co.....} No. 1, 60&10&5 %
Ives.....}
Cook's Douglass Mfg. Co.....dis 60&10 %
Griswold.....dis 50&10 %
Patent Solid Head.....dis 25 %
Russell Jennings' Auger, Dowell, Machine-Dowel and Hand Rail Bits.....dis 10&10&10 %
Ives' "Jennings" Bits.....dis 40&10&10 %
Expansive Bits, Clark's small, $18; large, 26..dis 25 %
Expansive Bits, Ives'.....$20@30, dis 33⅓ %
Expansive Bits Blake's.....$20, dis 40 %
Hollow Augers, Ives'.....dis 25 %
Hollow Augers, Douglass'.....dis 25&10 %
Hol. Aug., Bonney's Adjust., ℔ doz $48, dis 25&10 %
Hol. Aug., Stearns' Adjust., ℔ doz $48, dis 20&10 %
Hol. Aug., Ives' Expansive, each $4.50, dis 30&10 %
Hol. Aug., Universal Expansive, each $4.50, dis 20 %
Wood's.....dis 25 %
Gimlet Bits.....$7.50 ℔ gross, dis 50 %
Gimlet Bits, Diamond.....℔ doz $1.25, dis 40 %
Double Cut Gimlet Bits, Shephardson's.....dis 40 %
Double Cut Gimlet Bits, Douglass'.....dis 40 %
Double Cut Gimlet Bits, Ives'.....dis 50 %
Morse's Bit Stock Drill.....dis 40&10 %
L'Hommedieu's Ship Augers.....dis 15 %

AWL HAFTS.

Sewing Brass Ferrule.....$3.50 ℔ gross—dis 40&10 %
Patent Sewing, Short.....$11 ℔ gross—dis 40&10 %
Patent Sewing, Long.....$1.20 ℔ doz. net
Patent Peg, Plain Top.....$10 ℔ gross—dis 40&10 %
Patent Peg, Leather Top...$12 ℔ gross—dis 40&10 %

AWLS, BRAD SETS, &c.

Awls, Sewing, Common.....75c. to $1
Awls, Shouldered Peg.....75c to $1
Awls, Patent Peg.....50c to $1.50
Awls, Shouldered Brad, ℔ gross $2.70—dis 25&10 %
Awls, Handled Brad.....$7 ℔ gross—dis 25&10 %
Brad Sets, Aiken's.....℔ doz. $12—dis 45&10 %
Brad Sets, No. 42, $10.50; No. 43, $12.50....dis 70 %
Brad Sets, Stanley's Exc.' No. 1, $9.60. dis 30&10 %
Brad Sets, Stanley's Exc.' No. 2, $4.80. dis 30&10 %
Brad Sets, Stanley's Exc.' No. 3, $7.80. dis 30&10 %

AXES.

Collins & Co.....$7.25; beveled..$7.75
Cohoes Mfg. Co.....$7.25; beveled..$7.75
Lippincott or Mann's.
Single Bit, 4½ to 5½ and under.....℔ doz. $6.50 net
Single Bit, 4½ to 6 and over.....℔ doz. $7.00 net
Single Bit, beveled.....50c. doz. advance
Double Bit, 4½ to 5½ and under....℔ doz. $12.00 net
Double Bit, 4½ to 6 and over.....℔ doz. $13.00 net
Double Bit, beveled.....$1.00 ℔ doz. advance
Second quality Axes.....50 cts. less than above

AXLES.

Sheldon & Co., iron.....55% off
" " " steel.....55% off
AXLE GREASE—Frazer's.....℔ lb. 6c.

BALANCES.

Spring Balances.....dis 50 %

BELLS.

Hand, Light Brass.....dis 75&10 %
Hand, White Metal.....dis 60 %
Hand, Silver Chime.....dis 20&10 %
Hand, Globe (Cone's Patent.....dis 25&10 %
Gong, Abbe's.....dis 20&10 %
Gong, Yankee.....dis 30&10 %
Gong, Barton's.....dis 30&10 %
Leon Reading.....dis 25&10&10 %
Pull, Brook's.....dis 50&10 %
Crank, Taylor's.....dis 25&10 %
Lever, Sargent's.....dis 55&10 %
Bloomfield.....dis 20 %
Lever, R. & E. M. Co's.....dis 45&10&2 %
Call.....dis 25 %
Cow, Common Wrought.....dis 55&10 %
Cow, Western, Sargent's List.....dis 55&10 %
Cow, Kentucky, Sargent's List.....dis 55&10 %
Cow, Moore's or Dodge's, Genuine Ky., new list:
Nos. 0 1 1½ 2 3 5 5 6 Hog } dis. 70
$12 $10 $9 $8 $7 $4 $3.50 $2.50 $5 }
Cow, Texas "Star".....dis 40 %

BELLOWS.

Blacksmith's Common.....dis 50&10 %
Molder's.....dis 25 %
Hand Bellows.....dis 25 %

BLIND FASTENERS.

Francis.....dis 20 %
Mackrell's.....℔ doz pairs $1.00, dis 10 %
Van Sand's Screw Pattern.....$9 ℔ gross, net
Van Sand's Old Pattern. 1¼, $8; 1½, 8.50 ℔ gro. net
Merriman's.....new list, net
Zimmerman's, 10¾ in.....℔ gross $33.00
Zimmerman's, 9 in.....℔ gross $30.00

BLIND STAPLES.

Barbed, ½ in. and larger.....℔ lb 11c net
Barbed, ⅝ in.....℔ lb 13c net

BLOCKS.

Penfield Blocks.....} dis 50%
Bagnall & Loud.....}

BOLTS.

Cast Iron Barrel Shutter, &c.....dis 55&10 %
Cast Iron Chain (Sargent's list).....dis 60&10 %
Wrought Barrel.....dis 55&10 %
Wrought Square.....dis 55&10 %
Wrt. Shutter, all Iron, Stanley's list.....dis 50&10 %
Wrt. Shutter, Brass Knob, Stanley's list..dis 50&10 %
Wrought Shutter, Sargent's list.....dis 55&10 %
Wrought Sunk Flush, Sargent's.....dis 65&10&10 %
Wrought Sunk Flush, Stanley's.....dis 40&10 %
Wrought B. K. Flush, Stanley's.....dis 50&10 %
Carriage and Tire, Common, new list.....dis 80 %
Carriage and Tire, Philadelphia Pattern.....dis 80 %
Carriage Bolts, Clarke's.....dis 75&10 %
Norway.....dis 75&10 %
R. B. & W. Carriage (old list).....dis 65 %
Tire, American Screw Co's., Phila.....dis 80 %
Tire, "Bay State".....dis 65&10 %
Eagle Philadelphia Tire Bolt.....dis 82½ %
Stove.....dis 70 %
Plow.....dis 60&10 %
Machine.....dis 75 %
Bolt Ends and Lag Screws.....dis 75 %

BORAX.

15c ℔ lb net.

BRACES.

Q. S. Backus.....dis 50 %
Barber's.....dis 40&5 %
Spofford's Patent.....dis 50&5 %
Ive's Patent Braces.....dis 50 %
Common Ball (American).....dis 55 %
Amidon's.....dis 50 %

BORING MACHINES—WITHOUT AUGERS.

Sweet & Clark upright, 3.60 angular.....4.40 net
Lawrence " 3.00 " .....3.50 net
Hubbard " 3.00 " .....3.20 net
Phillips, with Augers.....7.00 7.50.....net

BRACKETS.

Shelf, plain.....dis 50&10 %
Shelf, fancy.....dis 55&10 %

BRIGHT WIRE GOODS.

New list.....dis 70&10&10&10 %

BULL RINGS.

Union Nut Co.....dis 55 %
Sargent's.....dis 60&10 %
Humason, Beckley & Co's.....dis 60&10 %

BUTTS.

Wrought Brass.....dis 70 %
Cast Brass, Fast Joint.....dis 20&10 %
Cast Brass, Loose Joint.....dis 10&10 %
Fast Joint, Narrow.....dis 60 %
Fast Joint, Broad.....dis 60 %
Loose Joint.....dis 70 %
Loose Joint, Japanned.....dis 70 %
Loose Joint, Jap, with Acorns.....dis 70 %
Parliament Butts.....dis 70 %
Mayer's Hinges.....dis 70 %
Loose Pin, no Acorn.....dis 70 %
Loose Pin, Acorns.....dis 70 %
Loose Pin, Acorns, Japanned.....dis 70 %
Loose Pin, Acorns, Jap'd, Plated.
Tips.....dis 70 %

Wrought Iron.

Fast Joint, Narrow.....dis 65%
Fast Joint, Lt. Narrow.....dis 65%
Fast Joint, Broad.....dis 65%
Loose Joint, Broad.....dis 65%
Table Butts, Back Flaps, &c.....dis 65%
Inside Blind, Regular.....dis 65%
Inside Blind, Light.....dis 65%
Loose Pin, Wrt.....dis 65%
Loose Pin, Light.....dis 65%
Spring Hinges—
Geer's Spring and Blank Butts.....dis 30 %
Hart Manufacturing Co.....dis 60&10 %
American Spring Hinge Co's.....dis 25 %
Gem Spring Hinges.....dis 25 %
Blind Butts, Shepard's, Nos. 50 and 60.....dis 70 %
Blind Butts, Shepard's, No. 050.....dis 70&5 %
Blind Butts, Shepard's No. 75.....dis 70&10 %
Blind Butts, Lull & Porter.....dis 80 %
Blind Butts, Huffer.....dis 50&10 %
Blind Butts, Clark's, Nos. 1, 3, 5.....dis 80 %
Standard Lull & Porter.....dis 75&10 %

BOW PINS.

Humason, Beckley & Co's.....dis 55&5 %
Sargent & Co's.....$19.70 and 21.40; dis 66&10 %
Hotchkiss.....dis 25 %

BUTCHER'S CLEAVERS.

Humason & Beckley Mfg. Co.....dis 25 %
Bradley's.....dis 25 %
Beatty's.....dis 25&5 %

1	2	3	4	5	6	7	8
$16.50	19.00	21.50	24.00	27.00	30.00	33.50	36.50

CAN OPENERS.

American.....℔ gross $7.50, dis 10 %
New Idea.....$15.00 gross
No. 4, French.....℔ doz $2.25, dis 55 %
No. 5, Iron Handle.....℔ gross $7.50, dis 10 %
Sardine Scissors.....℔ doz $7.00, dis 55 %
Sprague, No. 1, $2; No. 2, 2.25; No. 3, 2.50; dis 50&10 %
Universal.....℔ doz $3.00, dis 33⅓ %

CAPS, PERCUSSION, ℔ 1,000.

U. M. C., F. C. trimmed.....50c } dis 10&10 %
U. M. C., F. L. ground.....70c }
U. M. C., Cen. fire ground.....70c } dis 10&5 %
U. M. C., Double W. Proof.....$1.40 }
G. D. & S. B.....33c. dis 10 %
E. B. 1-10, Eley's.....60c
Musket, in 1-10's.....55c
Hicks Ground Edge in Brass Boxes.....55c

CARTRIDGES.

Rim.....dis 60 %
Central Fire, pistol size.....dis 40 %
" " Military.....dis 1.60 %
B. B. Caps, Round Balls.....1.45
" Swaged Conical.....1.75

NEW LIST ON CARTRIDGES.

Rim-fire	22 short	$ 5	long	$ 6.00
"	32 "	10	"	15.50
"	38 "	18	"	18.00
"	41 "	15	"	17.50

Central Fire—32, $11.00; 38, $13.50; 41, 15.00; 44, $19.

CARDS.

Horse and Curry, new list, July, 1881.....dis 10 %
Cotton, new list, July, 1881.....dis 10 %
Wool, new list, July, 1881.....dis 10 %

CARPET STRETCHERS.

Cast Steel, Polished.....℔ doz $5.00, dis 30 %
Cast Iron, Steel Points.....℔ doz $2.00, dis 50 %
Bullard's.....dis 25 %

CASTERS.

Bed.....dis 55 %
Plate and Shallow Socket.....dis 55 %
Deep Socket.....dis 25&10&10 %
Martin's Patent (Phœnix).....dis 25 %

CATTLE LEADERS.

Humason, Beckley & Co's.....dis 60&10 %
Sargent's.....dis 60&10 %
P. S. & W.....dis 25&10 %

CHAIN.

German Halter and coil Chain.....dis 50&10 %
Trace, Breast and Fancy.....dis 60 %
Oneida Halter Chain (old list).....dis 45&5 %
Galvanized Pump Chain.....℔ lb 6c net
Jack Chain, Iron.....dis 70 %
Jack Chain, Brass.....dis 60&10&10 %

CHALK.

White.....℔ gross 60c net
Red.....℔ gross 85c net
Blue.....℔ gross $1.00 net
White Crayons.....℔ gross 9c net

COTTON LINES.

Cotton Fish Lines.....dis 33⅓ %
Cotton Chalk Lines, 20 feet:

Nos. 11,	13,	15,	17,	20,	dis 40 %
3.20.	3.60.	4.00.	4.50.	5.25.	dis 40 %

CHISELS.

Socket Framing, Crossmans.....} dis 65&5 %
Socket Firmer, Crossmans.....}

	No. 1.	Extra.
Socket Framing & Firmer.....		
Socket, Douglass.....	75&5	75%
Socket, Ohio Tool Co.....	75&5	75%
Socket, Peck, Stone & Wilcox.....	75&5	75%
Socket, Corner.....		75%

Tanged Firmers, Douglass'.....dis 40&45 %
Tanged Firmers, Butcher's.....$5.00 to $6
I. Merrill's Socket and Framing Chisel...dis 65&10 %

CLAMPS.

Iron, Screw, Eagle.....dis 50 %
Iron, Adjustable, Stearns'.....dis 20&10 %
Iron, Cabinet, Sargent's.....dis 65&10 %
Iron, Carriage maker's, Carr & Crawley.....dis 25 %

CLIPS, AXLE.

Norway or Best.....dis 60&5 %
Superior.....dis 45&5 %
Conestogo.....dis 60&10 %
Coal Hods—Griffiths'.....dis 40 %

COCKS, BRASS.

Racking, new list.....dis 55&10 %
Globe, new list.....dis 55&10 %
Plain Bibbs.....dis 55&10 %
Ale and Beer, new list.....dis 55&10 %

COFFER MILLS.

Parker's.....dis 45 %
Wilson's.....dis 40&10 %
Logan & Strobridge.....dis 45 %
Enterprise Mfg. Co.....dis 25 %

COMPASSES, DIVIDERS, &c.

Compasses.....dis 60&10&10 %
Calipers.....dis 60&10&10 %
Dividers.....dis 60&10&10 %
Cook's Pencil.....dis 10 %

COOPERS TOOLS.

Bradley's.....dis 15@20 %
Barton's.....dis 20 %

(Awarded First-Class Medal at New Orleans.)

STEPHENS' VISES.

With STEEL FACED or SOLID STEEL SLIDING JAW, and ADJUSTABLE ATTACHMENTS. Superior in Make, Grip, Strength and Durability, and more economical in Time and Labor than any other Vise. Jewelers, Machinists in general, and Car and Locomotive Builders in particular, will find them especially adapted to their need. Also STEPHENS' PATENT PLANER CHUCKS. Sold by hardware, machinery and tool dealers. Send for descriptive circular and price-list.

MELVIN STEPHENS, Proprietor,
Office, 41 Dey St., NEW YORK.

Jewett's New Filter,

WITH NEW and IMPROVED FILTERING BEDS. (See Cut.)

For Lake, River, Hydrant, Cistern or Rain Water. Natural Gravel and Sand, combined with expressly prepared recarbonized Charcoal.

We have made a valuable improvement in our Filter, it being now constructed so as to prevent any "dirt" or solid matter from entering the Filtering Bed proper, so that the Filter can never become clogged or foul. In fact, the water in this Filter is as pure *before entering the Filtering Bed*, as any other Filter (not charcoal) ever can make it. After that the action of charcoal renders the water chemically pure—something that charcoal filters alone can do. With ordinary care this Filter will last for many years; and whenever it may need repacking, we can furnish a *New Filtering Vessel* at about the price it costs to repack, thus saving considerable expense and trouble. Many different sizes and styles, with or without Water Coolers. Price-list, directions for use and book of testimonials sent free by mail on application. Liberal discounts to the trade.

The JOHN C. JEWETT MFG. CO.
BUFFALO, N. Y.

J. STEVENS ARMS AND TOOL CO.

P. O. BOX 860.

Chicopee Falls, - MASS.

MANUFACTURERS OF

Spring Caliper with Patent Washer.

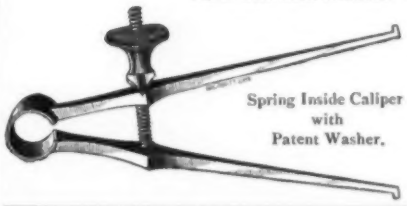
Spring Calipers and DIVIDERS.

Fine Machinists' Tools & Firearms.

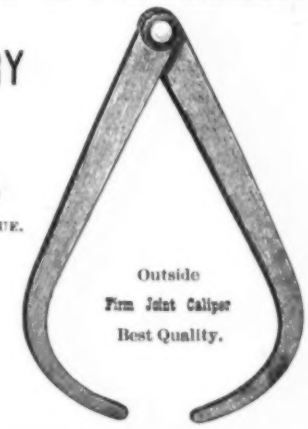
Our SHOOTING GALLERY RIFLE

Is the Favorite Everywhere.

SEND FOR ILLUSTRATED CATALOGUE.



Spring Inside Caliper with Patent Washer.



Outside Firm Joint Caliper Best Quality.

CAREW'S PATENT WIRE CUTTER.

These goods have recently been greatly improved. They are now made throughout of **FORGED STEEL.**

The advantage of this cutter is seen at a glance. The adjustable jaws are its main feature. These are made of the best tool steel, and are brought to a keen cutting edge before being tempered. The cutting quality is unsurpassed. Whenever they become dulled by use, they can easily be removed, by driving from the end showing price-mark, ground, and as easily replaced. This may be repeated as often as expedient; or they can be replaced by duplicate jaws, thus obviating the necessity of purchasing new cutters. **Five sizes 6, 8, 10, 12 and 14 inch.** If your merchant does not keep them, address

M. W. ROBINSON. Sole Agent, 79 Chambers St., N. Y.

Record Printing House,

Fine Cut Work A Specialty.
Cor. Exchange Place and Commerce St.

CROW BARS.

Cast Steel.....℔ lb 4c
Iron, Steel Points.....℔ lb 3½c

CURLING IRONS, &c.

⅝, ⅞, ¾ in., $1.80, 2.00, 2.50.....dis 10 %
Curling Tongs.....℔ doz $3.65, dis 10 %
Pinching Irons.....℔ doz $7.50, dis 20 %

CURRY COMBS.

Fitch's new list.....dis 50 %
Hotchkiss, Novelty, new list, July, 1880.....dis 25 %
Hotchkiss, Excelsior Superior Champion.....dis 25 %
Lawrence, "Perfect".....dis 25&10 %
Rubber.....℔ doz $10.00, dis 25 %
Sweet & Clarke.....dis 50 %
Lusters.....dis 25 %

CURTAIN PINS.

Silvered Glass.....net
White Enamel.....net

CUTLERY.

Association (Table).....net
Naugatuck Cutlery Co.....list net
Excelsior Knife Co.....net
Wilson's Butcher and Shoe Knives.....dis 30 %
Ames' Shoe Knives.....dis 15 %
Wm. Rogers Mfg. Co., Plated Cutlery.....Net

DOG COLLARS.

Embossed Gilt.....dis 20 %
Leather.....dis 25 %
Brass.....dis 25 %

DOOR SPRINGS.

Torrey's Rod, regular size, ℔ doz., $3..dis 40&10 %
Gem (Coil):
No. 1, Large Japanned.....℔ doz $4.00 } dis 40 %
No. 2, Medium Japanned....℔ doz 2.75 } dis 40 %
No. 3, Small Japanned.....℔ doz 2.00 } dis 40 %
No. 4, ("Shoo Fly") Screen door size, 1.50 } dis 50 %
No. 5, Screen door size.....2.00 } dis 50 %
No. 6, Medium.....2.75 } dis 50 %
No. 7, Large.....4.00 } dis 50 %
Standard—10 doz $1.25; 9 doz $1.75.....dis 60&10 %
8 doz 2.50; 6 doz $3.50.....dis 60&10 %
Hercules.....dis 50&10 %

DRAWING KNIVES

Ohio Tool Co.....dis 60&10 %
Crossman's No. 1.....dis 65&5 %
Nobles Mfg. Co.....dis 15 %
Bradley's.....dis 35 %
Adjustable Handle.....dis 20 %
P. S. & W.....dis 70&10 %
Douglass.....dis 75 %

DRILLS AND DRILL STOCKS.

Blacksmiths'.....each, $2.50, dis 10 %
Blacksmiths' Self-Feeding.....each, 7.50, dis 20 %
Breast, P. S. & W.....dis 20&10 %
Breast, Wilson's.....dis 20 %
Breast, Millers Falls.....each, $3.00, dis 25 %
Breast, Bartholomew's.....each, $2.50, dis 25&10 %
Wilson's Drill Stocks.....dis 10 %
Automatic Boring Tools.....each, $2.25, dis 20 %
Manneer Drill Mfg. Co s—
Model Bench Drill.....$10.00, dis. 50 %
XXX Post Drill.....$28.00, dis. 50 %

EGG BEATERS.

Dover.....℔ doz $2.50, dis 2 %
Medallion.....gross, $10.00
Victoria.....gross, $10.00

EMERY AND EMERY PAPER.

Regular numbers.....℔ lb 6c
Flour and F. F.....℔ lb 4c
B. & A. Emery Paper.....dis 20 %

ENAMELED AND TINNED WARE.

Kettles.....dis 55 %
Sauce Pans.....dis 35 %
Tinned Sauce Pans.....dis 35 %
Escutcheon Pins—Brass.....dis 50 %

ESCUTCHEONS.

Door Lock.....Same discounts as Door Locks
Brass Thread.....dis 25 %
Wood.....dis 25 %

FAUCETS.

Fenn's.....dis 40 %
Fenn's Cork Stops.....dis 33⅓ %
Star.....dis 55&10 %
Frary's Patent Petroleum.....dis 20&10 %
West's Patent Key.....dis 45 %
Anchor Lock.....dis 45 %
Metallic Key, Leather Lined.....dis 60 %
Cork Lined.....dis 70 %
J. Sommer's Best Metallic Key.....dis 40 %
J. Sommer's Cork Lined, 1st quality.....dis 50 %

FILES.

E. M. Boynton's.....new list, dis 25 %
Western File Co.....dis 45 %
Butcher's.....$4.50 to £
Moss & Gamble.....$4.50 to £
H. Disston & Sons (new list).....dis 40 %
Heller Bros.' Horse Rasps.....dis 30&10&5 %
Nicholson.....dis 55&10 %
New American.....dis 50&10 %
Union File Co.....dis 45 %
Stubs, new list.....$7.50 to £, 25 % off

FLUTING MACHINES.

Knox, 4½-inch Rolls.....$3.50 each } dis 35 %
Knox, 6-inch Rolls.....$4.00 each } dis 35 %
Knox, 8-inch.....$6.50
Eagle, 3½-inch Roll.....$2.15, dis 35 %
Eagle, 5½-inch Roll.....2.85, dis 35 %
Crown, 4½-in., $3.50; 6, $4.00; 8, $6.50 each...dis 35 %
Crown Jewell.....6-in., $3.40 each....dis 35 %
American, 5-in., $3; 6-in., $3.40; 7-in., $4.50 each dis 35 %
Domestic Fluter.....$1.50 each, net
Geneva Hand Fluter, White Metal, ℔ doz $12 dis 25 %
Crown Hand Fluter, Nos. 1, $15; 2, $12.50;
3, $10.50; 4, $8.25 ℔ doz.....dis 35 %
Combined Fluter and Sad Iron, ℔ doz $15.00, dis 30 %

FORKS.

Lawson & Brenizer.....dis 60 %
Remington.....dis 50&10 %
Sheble & Fisher.....dis 50&10 %

FRY PANS.

Burnished list as follows.....dis 60&10&10 %

No	0	1	2	3	4	5	6	7	8
℔ doz	$3.00	3.75	4.25	4.70	5.25	6.00	7.00	8.00	9.00

GAUGES.

Marking, Stanley's.....dis 50&10&10 %
Marking, Chapin's.....dis 55&10&10 %
Wire.....dis 10&10 %
Wire, Disston's.....dis 20 %
Wire, Wheeler, Madden & Co.....dis 10 %

GIMLETS.

Nail and Spike.....dis 40 %
"Eureka" Gimlets.....dis 50 %
"Diamond" Gimlets.....dis 50 %
Double Cut, Shepardson's.....dis 50 %
Double Cut, Hartwell's.....dis 50 %
Double Cut, Ives'.....dis 50 %
Double Cut, Douglass'.....dis 33⅓ %
"Reel".....℔ gro. $12.00 dis 25 %

GLUE POTS.

Tinned and Enameled.....dis 35 %
Family, Howe's "Eureka".....dis 25 %
Family, L. F. & C.'s "Handy".....dis 30 %

GRINDSTONE FIXTURES.

Sargent's Patent.....dis 70&10 %
Reading Hardware Co.....dis 25&10 %

GUN WADS.

Eley's B. E. wads, 11 upwards.....$1.75
" " " 9 and 10.....2.00
" " " 7 " 8.....2.25
" P. E. " 11 upwards.....2.90
" " " 9 and 10.....3.65
" " " 7 " 8.....4.45

HAMMERS.

Maydole's.....dis 15 %
Hartford Hammer Co.....dis 25 %
Maga'c Tack, Nos. 1,2,3, 1.26, 1.50 and 1.75.dis25&10%
Warner & Noble's.....dis 5 %
Kip's or Selsor's.....dis 30 %
Yerkes & Plumb.....dis 15 %
Buffalo Hammer Co's—
Sledges.....dis 35 %
Mason and Spalling Hammers, &c.....dis 60&10 %

HANDLES.—Door or Thumb Latches.

Nos	0	1	2	3	4	
Per doz	$0.80	1.00	1.28	1.35	1.50.	dis 55&10 %

Roggin's Latches.....℔ doz 35c.@40c. net
Bronze Iron Drop Latches.....℔ doz $0.90@1.10
Jap'd Store Door Handles—Nuts, $1.25; Plate, ——;
no Plate, $1.10.....dis 10 %
Barn Door.....℔ doz $1.60, dis 10 %
Wrought Chest.....dis 65&10 %
Surface Chest.....dis 55&10 %
Flush Chest.....dis 55&10 %
Lifting.....dis 50&10 %
Saw and Plane.....dis 40&10 %
Lippincott Cross-Cut Saw.....20c. per pair
Hammer and Hatchet.....dis 20 %
Brad Awl.....℔ gross, $3.00, dis 20&10 %
Chisel, all kinds.....dis 50&10 %
Auger, assorted, ℔ gross.....$4.50
Auger, large, ℔ gross.....5.00
Patent Auger, Ives'.....dis 25 %
Patent Auger, Douglass'.....℔ set $1.25 net
Patent Auger, Swan's.....℔ set 1.00 net

HAMMOCK CHAIRS.

White Mountain, per doz.....$36.
" " Finished in red, per doz.....$42.0

HANGERS.

Cronk Hanger Co.—
No. 4, per doz. pair.....$12.00, 50&10 %
" 5, " " " .....14.40, 50&10 %
" 6, " " " .....18.00, 50&10 %
Iron clad track.....8 cents per foot, 50&10 %
Barn door stays.....$3.00 per doz., 50&10 %
Barn Door, old patterns.....dis 60&10 %
Barn Door, New England.....dis 60&10 %
Climax (Anti-Friction).....dis 50 %
Warner's.....dis 20 %
Richard's.....dis 20 %

HATCHETS.

Underhill's.....35 %
Haines' Soild Steel.....30 %
Shingling, Nos. 1 2 3.....℔ doz $7.25 $8.00 $8.75
Claw, Nos. 1 2 3.....℔ doz 7.75 8.50 9.25
Lathing, Nos. 1 2 3.....℔ doz 7.50 8.00 8.50
Hammond's new list.....dis 45 %
Blood's.....dis 35 %
Hunt's.....dis 30 %
Russel's, low list.....dis 40
Cobocs Bench Broad Adzes.....40

HAY KNIVES.

Gem.....℔ doz $13.50
"Lightning".....℔ doz $20.00 net 5 %
Wadsworth's.....dis 30 %

HINGES

Plate Hinges { 8,10&12 in.....5½c. ℔ lb.
"Providence" { over 12.....4½c. ℔ lb.
Screw Hook { 8, 10, 12 in.....3½c. ℔ lb.
and Strap. { 14 to 36 in.....2½c. ℔ lb
Crown spring hinges, for screen doors, dis 60 %; for for solid doors, single action, dis 45 %; for solid doors, double action, dis 55 %.
Crown Screen Door Latch.....℔ gross $12, dis 55 %
Crown Christmas-Tree Holders, 2-inch, ℔ doz $9; 3-inch, $12.....dis 45 %
Bickford Portable Pump.....each $6, dis 20 %
American Cake Mixer, No. 6.....each $3.50, dis 20 %
American Tobacco Cutter.....℔ doz $15, dis 30 %
A. M. Co. Clothes Wringer, No. 2 rolls,
10x1¾, ℔ doz $37.50; No. 2½ rolls,
12x1¾, $48.....dis 20 %
Heavy Welded Hook { 8@12 in. $7.50 ℔ 100 lb. } dis 20 %
{ 14 in. & up, $6 ℔ 100 lb. } dis 20 %
Screw Hook and Eye... { ⅝ & 1 in.....9c. } dis 20 %
{ ¾ in.....9c. } dis 20 %
{ ⅜ in.....10c. } dis 20 %
{ ½ in.....12c. } dis 20 %
Wrought Strap & T list, Dec. 20, '77.....dis 65%

HOES.

Planters.....60&10&5 %
Riveted Shank.....℔ doz $5.00, dis 60&10&5 %
Grub.....dis 50 %
Hick's Pat. Solid C. S. Planters'.....dis 60&10 %
Hick's Pat. Solid C. S. Scovill Pattern....dis 60&5 %
Hubbard, Bakewell & Co.....dis 60 %

HORSE NAILS.

Ausable:	Nos.	5	6	7	8	9	10	
Plain, ℔ lb		30c	27c	25c	24c	23c	22c	dis 20&10 %
Finish'd ℔ lb		31c	28c	26c	25c	24c	23c	dis 20&10 %
Clint'n, P'n, "		....	23c	21c	20c	19c	18c	dis 20&10 %
Clint'n, Fin'd "		...	24c	22c	21c	20c	19c	dis 20&10 %
Essex, ℔ lb		....	31c	28c	26c	25c	24c	23c...dis.... 30 %
Putnam "		....	27c	24c	22c	21c	20c	19c...dis 5&10 %
Saranac "		....	26c	23c	21c	20c	19c	18c.....dis 20 %
Globe, "		..	26c	23c	21c	20c	19c	18c...dis 10&5 %
N'thw'n "		....	28c	25c	23c	22c	21c	20c.dis 10&10 %
Champlain Forged ℔ lb		...	31c	28c	26c	25c	24c	23c.dis 30&10 %
A. C., ℔ lb		.....	28	25	23	22	21	21.dis 10,10&5 %
C. B. K.		....	....	28c	25c	23c	22c	21c	21c...dis 1c&5 %
Bridgewater		....	28c	25c	23c	22c	21c	20c.....dis 30 %
New Haven		....	31c	28c	26c	25c	24c	23c.dis 30&10 %
Capewell		.....	31c	26c	26c	25c	24c	23c.dis 20&10 %

HORSE SHOES.

Burden.....℔ keg $3.85
R. I. Horse Shoe Co., Perkin's Improved,
Light, Medium and Heavy.....℔ keg $3.87½
Mule Shoes.....℔ keg $4.87½
Walker's—Forged: (Light, Medium and Heavy.)
Horse.....℔ keg $3.85
Mule.....℔ keg $4.85
Bryden Forg'd Heel & Toe Horse Shoes, $4.75 ℔ kg. } dis 25
" " Plain " " " $4.75 " } dis 25
" " { Frog } " " $5.00 " } dis 25
" " { Pressure } dis 25
" " Heel & Toe Mule " $5.75 " } dis 25
Bryden Steel Mule Shoes, $6.75 ℔ keg.....dis 5 %
Diamond State Horse Shoes.....$3.85 ℔ keg
Diamond State Mule Shoes.....$4.85 ℔ keg
Phœnix Light, Medium and Heavy Horse
Shoes.....$3.87½ ℔ keg
Phœnix Mule Shoes.....$4.87½ ℔ keg
Ox Shoes—Mt. Carmel Ox Shoes.....16 cts. ℔ lb.

ICE CREAM FREEZERS.

Peerless—3 quart, $4.50; 4 quart, $5.50; 6 quart, $7. 8 quart, $9; 10 quart, $12. The Gooch Patent "Giant"—14 quart, $20; 18 quart, $25; 21 quart $30; 25 quart, $35; 32 quart, $40; 42 quart, $45. Discount 50&10 %.
American—2 quart, $2.75; 3 quart, $3.25; 4 quart, $3.75; 6 quart, $5 each.....dis 45 %
Crown, single action, 2 quart, $3.75; 3 quart, $4.50; 4 quart, $5.50; 6 quart, $7; 8 quart, $9; 10 quart, $11; 14 quart, $14.....dis 45 %
Crown, double action, with crank, 8 quart, $10.50; 10 quart, $13; 14 quart, $16.50; 18 quart, $21; 24 quart, $25. With fly wheel, 8 quart, $13; 10 quart, $16; 14 quart, $20; 18 quart, $25; 24 quart, $30; 32 quart $37.50.....dis 45 %
Star, double action, 2 quart, $3.75; 3 quart, $4.50; 4 quart, $5.50; 6 quart, $7; 8 quart, $9; 10 quart, $11; 14 quart, $14.....dis 45 %
Gem, double action, 2 quart, $3.75; 3 quart, $4.50; 4 quart, $5.50; 6 quart, $7; 8 quart, $9; 10 quart, $11; 14 quart, $14.....dis 55 %
Crown Ice Chipper.....℔ doz $7.50, dis 35 %

KNOBS.

Carriage, (Jap'd 80 c ℔ gross).....dis 60&10 %
Base—Common.....dis 30&10 %
Hemacite Door Knobs.....new list, dis 35&5 %

HANIKA IRON FENCE CO.

Office 19 N. Market Street. { Springfield, Ohio. { Works, Southern Ave. on P. C. & St. L. R. R.

"HANIKA" Lawn Mower

MADE OF MALLEABLE IRON and STEEL.

Architectural Iron Work, Plain and Ornamental Iron Fencing, Mall. Iron Cresting, Window and Wrought Cellar Guards, etc.

JAIL WORK A SPECIALTY.

Mall. Iron Cresting.

☞ CONTRACTORS AND BUILDERS IN THE SOUTH it will pay you to write for our catalogues and price-lists. Correspondence solicited.

Conductors' Punch. Flower Stand. Wrought-iron Fence. Chair. Revolving Punch.

THE FRED. J. MEYERS MFG. CO.

COVINGTON, KY., Manufacturers of

WIRE GOODS OF ALL KINDS,

Wrought-iron Fencing, Cresting and Hardware Specialties.

Send for Illustrated Catalogue and Price List.

Window Guard. Sand Screen. Sand and Grain Riddle. Wire Counter Railing. Mocking Bird Cage.

Covert Manuf'g Company

WEST TROY, N. Y.

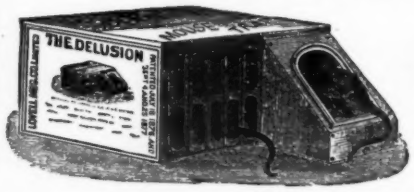
Manufacturers of COVERT'S Celebrated Harness Snaps, Swivel Snaps, Open Eye Bit and Chain Snaps, Snap and Thimble for Horse and Cattle Ties; ROPE GOODS, consisting of Web and Rope, Halters, Rope Horse and Cattle Ties, Web Horse Ties, Halter Leads, Driving Reins, Weight Cords, Hammock Ropes, Hitching Cords, Lariat Tethers and Picket Pins. Also, Leather Horse Ties, Etc. Breast Chains, Heel Chains, Chain Cow Ties, Halter Chains, Martingale Chains, Rein Chains, Post Chains, Butt Chains, Back or Cart Chains, Log Chains, Stake Chains, Trace Chains. Also, STUD, CABLE AND COIL CHAIN. CHAINS OF ALL KINDS MADE FROM SAMPLE OR DRAWING.

PATENT ADJUSTABLE SOLDERING IRONS.

Send for Illustrated Catalogue and Price-List.

DELUSION MOUSE TRAP

——52,932 Sold in One Month.——



THE ONLY SUCCESSFUL Self-Setting TRAP.

"The mouse goes in to get the bait
And shuts the door with his own weight,
And then he jumps right through a hole
And thinks he's out; but, bless his soul,
He's in cage, somehow or other,
And sets the trap to catch another."

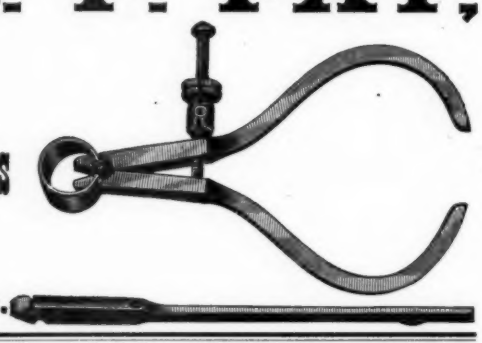
LOVELL MANUFACTURING CO., it Limed, ERIE, PA.

CHAS. P. FAY,

——Manufacturer of——

MACHINISTS'

Hardware Specialties



49 TAYLOR ST.,

Springfield, - Mass.

To Secure SOUTHERN TRADE

ADVERTISE IN THE

MANUFACTURERS' RECORD.

Door Mineral.....
Door Por. Jap'd..
Door Por. Plated.
Door Por.....
} Same discounts as Door Locks.
Furniture Plain..... 75c gross inch, dis 10 %
Furniture, Wood Screws.....dis 20 %
Picture.....dis 50&10 %
Hemacite, Picture.....dis 35 %
Shutter, Porcelain.....dis 50&10 %

LADLES.

Melting & Skim'ng, Monroe's Pat. ℔ doz $4..dis 40 %
Melting, C & C..... ..... dis 30&10 %

LAWN MOWERS.

Acme Buckeye, Easy & Excelsior, new list. dis 40&10 %

LINES.

Linen Fish.....dis 25&10 %
Wire Clothes, Galvanized, 100 feet.....℔ doz $3.00

LOCKS AND LATCHES.

Cabinet, Eagle.....
Cabinet, Gaylord.....
Cabinet, Bridgeport.....
} Changes made in list price of some numbers Jan. 1, 1881, dis 25&2 %
Cabinet, P. & F. Corbin.....dis 40 %
Trunk, new list, Jan 1, 1881.....dis 15&2 %
Yale Lock Co., Flat Key..... ... ...dis 40 %
Plate.....dis 33⅓&2 %

DOOR LOCKS, ETC.

Bradford .....
Norwalk.....
Norwich.....
P. & F. Corbin.....
Russell & Erwin.....
Mallory, Wheeler & Co....
Nimick & Brittan Mfg. Co..
} List prices as revised Dec. 18th, 45%&2% for cash.
Padlocks—Russell & Erwin.....
Mallory, Wheeler & Co.....
Norwich Lock Manf. Co.....
Wm. Wilcox & Co.....
Nimick & Brittan Mfg. Co.....
} dis 70 % and 2% for cash.
Wm. Wilcox & Co's Plate Locks .....dis 33⅓ %
Yale Lock Manf. Co's "Standard"..... dis 40 %
Romer's.....dis 25@40 %
Conestoga .....dis 80 & 10 %
Scandinavian, "Norwich".....dis 50&10 %
Nimick & Brittan's Burglar-Proof Locks....dis 50&2%

MALLETS.

Penfield Block Co., Apple, Hickory and Lignumvitæ.....dis 30 %

MEAT CUTTERS.

Dixon's (P. S. & W.) Nos. 1 2 3 4.
℔ doz $14 $17 $19 $30–dis 35 %
Perry's, Nos. 1 2 3 4 4 gr'd 5 gr'd
Each.....$3 4 5 11 13 36 dis
Woodruff's (P. S. & W.).....Nos. 100 150
℔ doz. $15 18-dis 35 %
Hales'.....Nos. 11 12 13
℔ doz. $27 35 45–dis 50&10&2 %
Kieser's No. 55..... ....$40 ℔ doz dis 40 %
Kieser's Gem.....$25 ℔ doz dis 40 %
Kieser's No. 82.....$40 ℔ doz dis 40 %
Kieser's Monarch.....$45 ℔ doz dis 40 %
Beef Shaver, (Enterprise Manf. Co.).....dis 25 %

MOLASSES GATES.

Stebbins Patterns.....dis 70&10 %
Stebbins Genuine .....dis 67½&10 %
Stebbins Tinned Ends.....dis 40&10 %
Chase's Hard Metal.....dis 50&10 %
Self-Measuring, (Enterprise)..... .....dis 20 %
Lincoln's Pattern.....dis 60&10 %
Weed's.....dis 15 %
Boss Nos. 1 2 3 4
$7 $8 $9 10....℔ doz
Boss, Japanned Finish.....dis 60&10&10 %
Boss, Bronze Finish..... .....dis 50&10&10 %

NUTS AND WASHERS.

Square Nuts.....8 c off list.
Hexagon Nuts.....8½c off list.
Washers.....7½c off list.

OILERS.

Zinc and Tin.....dis 60&10 %
Brass and Copper..... ....dis 50 %
Malleable (Hammer's).....℔ doz $5, dis 10 %

PINKING IRONS.

Per dozen.....75 cts. net

PLAITING MACHINES.

Astor Plaiting Machine.....each $15, dis 20 %
Crown Plaiting Machines..... .....dis 25 %
6 in., $6; 10 in. $8 each.

PLANES AND PLANE IRONS.

Bench, First Quality.....dis 20 %
Bench, Second Quality.....dis 25 %
Molding.....dis 15 %
Bailey's (Stanley R. & L. Co.) New list, Jan. 1879 dis 20&10 %
The Stanley (S. R. & L. Co.) new list, January 1879.....dis 20&10 %
Bailey's .....dis 20&10 %
Plane Irons, Butcher's.....$5.50 to $7
Plane Irons, Auburn Tool Co.....dis 20 %
Plane Iron, Ohio Tool Co.....dis 20 %
Plane Irons, Sandusky Tool Co..... .....dis 20 %

PLIERS AND NIPPERS.

Button's Patent .....dis 33⅓ %
Hall's Pat. Compound Lever Cutting Nippers, No. 2, 5 in. $13.50; No. 4, 7 in., $21 ℔ doz..dis 25 %
Gas Pliers.....dis 50 %
Cronk's Patent Cutting Pliers: 8 inch $15.00; 10 inch $21.00.....dis 35%

PLUMBS AND LEVELS.

Disston's.... .....dis 40 %
Stanley R. & L. Co.'s Pat. Adjustable.dis 65&10&10 %
Stanley R. & L. Co.'s Non-Adjustable.dis 65&10&10 %
Chapin's Patent Adjustable.....dis 65&10&10 %
Chapin's Non-adjustable.....dis 65&10&10 %
Standard Rule Co.'s New Adjustable.....dis 65&10 %
Standard Rule Co.'s Non- Adjustable.....dis 65&10 %
Pocket Levels.....dis 65&10 %

RAIL.

Sliding Door, Wrought Brass.....℔ ft. 43c. dis 30 %
Sliding Door, Bronzed Wrt. Iron...℔ ft. 12c. dis 35 %
Sliding Door, Iron, Painted.....℔ ft. 4c. dis 10&10 %
Barn Door....inch.....½ ¾ ⅞
Per 100 feet..$2.60 3.60 5.60–dis 10 %
B. D. for N. E. Hangers—
Small. Med. Large.
Per 100 feet.....$2.10 2.70 .30 net.

RIVETS.

Iron and Tinned, new list, Dec. 10, 1881.....dis 50 %
In bulk, new list, Dec. 10, 1881.....dis 45 %
Copper Rivets and Burrs.....dis 60&10 %
Nos. 7 8 9 10 11 12 13 14 15
℔ lb.. 49c. 50c. 52c. 54c. 56c. 58c. 60c. 65c. 70c.
RIVET SETS.....dis 40 %

RODS.

Stair, Brass.....dis 25 %
Stair, Black Walnut.....60c. ℔ doz.—net

RULES.

Boxwood. Ivory.
Chapin's.....
Standard.....
Stanley.....
} dis 80 % } dis 50&10 %
Stevens & Co.....dis 70&10%. Ivory.....dis 50 %
Stevens & Co. Miscellaneous.....dis 50&10 %

SAD IRONS.

Self-Heating, Charcoal.....℔ doz 9.00 net
Mrs. Pott's Irons..... .....dis 35 %
Enterprise Star Irons, new list, July 20, '82....dis 35 %
Comb'd Fluter and Sad Iron....℔ doz $15.00, dis 15 %
Common Sad Irons.....,2½c ℔ lb

SAND PAPER.

Baeder & Adamson's Flint, 00@1½ ..$4.50 ℔ r'm.
Baeder & Adamson's Flint, 2, 2½&3..5.00 ℔ r'm.
Baeder & Adamson's Flint, Assort'd 4.75 ℔ r'm.
Baeder & Adamson's Star..... ..... 3.75 ℔ r'm.
Baeder & Adamson's Emery ℔ r'm $6.50@11.50
} dis 50 %
Bartle's Sand, Flint and Emery Paper...dis 30&5 %

SASH LOCK.

Clancy's No. 100, per gross..... dis 20%
Nimick & Brittan Mfg. Co..... dis 50%

SASH CORD.

Common ....℔ lb, 14c. net
Patent.....℔ lb, 17c@18c. net
Silver Braided Lake Hemp.....℔ lb, 50c, dis 10 %
Silver Braid, Lake White Cotton, ℔ lb, 50c. dis 10 %
Silver Braided Lake Drab Cotton, ℔ lb. 55c. dis 10 %
Silver Lake Cable Laid, Bengall Unbleached Hemp, 17 cts.....dis 10 %
Russian Hemp, 19 cts..... .....dis 10 %
Italian Hemp, 34 cts..... .....dis 10 %
Samson Braided, white cotton.....dis 30 %
" " drab cotton.....dis 30 %

SASH WEIGHTS.

Solid Eyes, in 500-lb. lots and over, ℔ lb. 1¼c. net

SAUSAGE STUFFERS OR FILLERS.

Miles..... ℔ doz. $20, dis 25&5 %
"Perry"..... ... ℔ doz., No. 13; No. 0, $21....dis 25 %
Enterprise Mfg. Co.....dis 30 %
Monarch.....dis 40 %

SAWS.

Boynton's Lightning Cross Cuts, new list....dis 40 %
Boynton's Circular and Mill..... dis 40 %
Boynton's Ice..... .... dis 25 %
Boynton's Lightning Hand, Panel and Rip...dis 25 %
Disston's Circular.....dis 40 %
Disston's Mill.....dis 40 %
Disston's Cross Cut.....dis 40 %
Disston's Hand, Panel, Rip, &c.....dis 20 %
Hubbard, Bakewell & Co. Circular Saws...dis 40&5 %
Hubbard, Bakewell & Co. Cross Cut.....30c. ft.
Hubbard, Bakewell & Co., One-Man's, X Cut dis 40&5 %
Hubbard, Bakewell & Co., Mill Saws. ....dis 40&5 %
Peace Circular and Mill.....dis 40 %
Peace Hand, Panel and Rip.....dis 25 %
Peace Cross Cuts.....dis 35 %
Peace Band Saws, all widths.....dis 10 %
Webster Cross Cut, with handles,....dis 25&10&10 %
Griffin's Hack Saws and Blades.....dis 30 %

SAW FRAMES.

White.....℔ doz $1.05, dis 10 %
Saw Rods..... .....$10 list, dis 10&10 %

SAW SETS.

Stillman's Genuine, ℔ doz $3.50 and $5.50....dis 10 %
Stillman's Imitation.....℔ doz $3.25, dis 30&10 %
Common Lever.....℔ doz $2.00, dis 30&10 %
Leach's.....No. 0, $8.00; No. 1, $15; dis 15 %
Hammer, Hotchkiss..... .....$5.50, dis 10 %
Aiken's Genuine.....$13.00, dis 50&10 %
Aiken's Imitation..... .....$7.00, dis 50 %
Disston's.....dis 20 %
Morrill's.....No. 1, $15; No. 5, $52; dis 35&10 %

SCALES.

Hatch, Counter, No. 171....℔ doz $42, dis 37½&10 %
Hatch, Tea, No. 161.....℔ doz $15.00, dis 37½&10 %
Union Platform, Keystone..... .....$6, dis 45 %
Chicago Scale Co.....Special dis
Fairbanks'..... .....dis 20 %
Forsyth Scale Co.....dis 45 %
Howe's.....dis 20&10 %
Chatilon's Grocers'..... .....dis 40 %
Chatillon's Eureka.....dis 25 %
Family Universal.....dis 50 %
Family Favorite.....dis 30 %
Family Turnbull's.....dis 30 %
Scale Beams, List of Jan. 12, 1882.....dis 0 %

SCRAPERS.

Adjust. Box Scraper (S. R. & L Co.) $6.50, dis 20&10 %
Box, 1 Handle..... .....℔ doz $4, dis 10 %
Box, 2 Handle..... .....℔ doz $6, dis 10 %
Foot.....dis 45&10 %
Ship, common.....℔ doz $3, net
Wilson Mfg. Co..... ... .dis 10 %

SCREW DRIVERS.

Douglas Mfg. Co..... .....dis 20&10 %
Disston's..... .. ..dis 40 %
Cowles Mfg. Co.....dis 50&12&10 %
Stanley Rule & Level Co's. Var. Hdls....dis 50&10 %
Stanley Rule & Level Co.'s Black Hdls...dis 40&10 %
Ratchet.....dis 33⅓ %
Clark's Patent..... ....dis 25 %
Shepardson.....dis 25 %

SCREWS.

Standard new list, Feb. 15.
Flat Head Bright.....80 %
Round Head Blued.....75 %
Round Head Bright.....75 %
Flat Head Brass..... .....75 %
Round Head Brass.....70 %
Flat Head Blued (add 5 % to net)..... .....80 %
Continental Flat Head .... 85 %
Brass and Silver Capped.....40 %
Japanned Flat Head.....70&10 %
Coach, Patent Gimlet Point.....dis 75 %
Coach, Common or Lag.....dis 60&10&10 %
Bed.....dis 10 %
Machine, Flat Head, Iron.....dis 55 %
Machine, Round Head, Iron.... .. ..dis 50 %
Bench, Iron.....dis 50&10 %
Bench, Wood, Beach.....℔ doz $3.00, dis 10 %
Bench, Wood, Hickory.....dis 20&10 %
Hand, Wood..... .....dis 20&10 %
Hand Rail, Sargent's.....dis 60&10 %
Hand Rail, Humason, Beckley & Co.'s...dis 40&10 %
Hand Rail, Am. Screw Co., list Jan. 1, '81....dis 70 %
Jack (Wilson's).....dis 25 %

SCREEN FRAMES AND FIXTURES.

Standard Window Screens No. 1, ℔ doz $4; 2, $5
" Door " No. 5, $15; dis 50&10 %
" Window Corner Irons, No. 3, doz. st's, $2
" Door " " No. 6, " " $3
dis 50&10 %
" Door Latches, ℔ dozen, $3.60.....dis 50 %
Porter's Patent Window and Door Screen Frames:

PER DOZ. SETS.

	In White.	Im. Bl'k Walnut.	
No. 20.....	$2.75	$3.25	dis 33⅓ %
No. 21.....	2.25	4.00	
No. 22.....	5.50	6.75	
No. 23.....	6.00	7.50	
No. 30.....	9.00	11.00	

Porter's Corners—

No. 0. Corners and Sticks complete for a three-foot window, ℔ doz sets.....	$4	dis 33⅓ %
No. 1. Set for Window, ℔ doz sets Bronzed, $2.40; Nickel, $5.62		
No. 1½. " " ℔ doz sets, Bronzed, $3.25; Nickel, $7.50		
No. 4. " " ℔ doz sets, Bronzed $4.00; Nickel, $8.00		
No. ½. " " or door, ℔ doz sets, Bronzed, $1.20; Nickel, $3.00		
No. 4½. " " or Door, ℔ doz sets, Bronzed, $2.00; Nickel, $4.00		
No. 2½. " Door, ℔ doz sets, Bronzed, $6.75; Nickel, $15.00		
No. 3. " " ℔ doz sets, Bronzed, $12.00; Nickel, $24.00		

Window screen frames (Stuart's)..... ....dis 25 %

SHEARS AND SCISSORS.

American (Cast) Iron..... .....dis 70&10 %
Pruning.....see Pruning Hooks and Shears
Barnard's Lamp Trimmers.....℔ doz $4.00
Tinners'.....dis 15 %
Massachusetts.....dis 80&10 %
Seymour's..... .....dis 60&10 %
Jersey Shears.....dis 80 %
J. Wiss & Son, Nickle, 50&5 %; Japanned, 60&5 %

Ross Patent Refrigerator

Is the Only Guaranteed

Dry Cold-Air Refrigerator

MANUFACTURED.

The Best in the World For Families, Butchers, Brewers, Packers, Steamboats, Railroad Cars, Fruit Houses, Dairies, Grocers, Saloons, &c.

Send for Illustrated Catalogue and Price-Lists.

Ross Patent Refrigerator Co.

24 to 32 Staats Street,

BUFFALO, N. Y.

J. LANSING MOORE, President.
GEO. D. BRIGGS, Vice-President.
L. O. DENISON, Secretary and Treasurer.

Wm. Chisholm & Sons

MANUFACTURERS OF

SOLID CAST STEEL

Shovels, Spades,

SCOOPS,

AND COAL SHOVELS

Cleveland, Ohio.

These goods are the acknowledged standard wherever there is hard work to be done, and are recommended for RAILROAD, MINING, FURNACE and CONTRACTORS' USE IN GENERAL.

—Send for Catalogue.—

CRONK

Hanger Co.

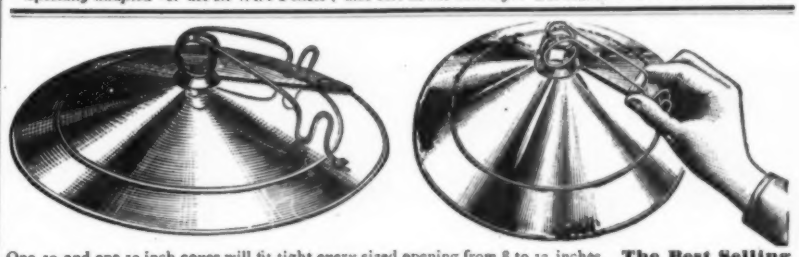
ELMIRA, N. Y.

MANUFACTURERS OF THE

CRONK'S PATENT

Wire Cutter, Bender and Plier and Hog Ringer Combined.

Specially adapted for use on Wire Fences; also best in the world for TINNERS' *use. Patent Allowed.*



One 10 and one 12 inch cover will fit tight every sized opening from 8 to 12 inches. **The Best Selling Article of Tinware Ever Offered.** For prices address,

TOPLIFF & ELY, Elyria, Ohio, SOLE MANUFACTURERS.

STEEL CASTINGS

FROM 1-4 to 15,000 lbs. WEIGHT.

True to pattern, sound, solid, free from blow-holes, and of unequaled strength.

Stronger and more durable than iron forgings in any position or for any service whatever.

40,000 CRANK SHAFTS and 30,000 GEAR WHEELS of this steel now running prove this.

CRANK SHAFTS and GEARING specialties.

STEEL CASTINGS of every description.

☞ Send for Circulars and Prices to

CHESTER STEEL CASTINGS CO.

Office, 407 Library Street, Philadelphia. **Works, Chester, Pa.**

SHEAVES.

Sliding Door, M. W. & Co., List.....dis 45&2 %
Sliding Door, R. & E. list.....dis 60&10&2 %
Sliding Door, Patent Roller.....dis 60&10&2 %
Sliding Door, Pt. Roller, Hatfield's...dis 60&10&2 %
Sliding Door, Russell's Anti-Friction..dis 60&10&2 %
Also see Hangers.

SHOVELS AND SPADES.

Ames, New List, July 1, 1887.....dis 15 %
Griffiths.....dis 50&5 %
Remington's (Lowman's Patent).....dis 30 %
Rowland's.....dis 60 %
Kimballs.....dis 35 %
Lippincott, new list.....dis 20 %
Hussy, Bins & Co.....dis 15 %

SPOKE TRIMMERS.

Bonney's.....⅊ doz $10, dis 40&5 %
Stearns'.....⅊ doz $9, dis 20&10 %
Ives'... ....No. 1, $15; No. 2, $12 ⅊ doz, dis 55&10 %
Douglass'.....⅊ doz $9, dis 15 %

SILVER PLATED WARE.

Wm. Rogers Manf. Co.....dis 50, 5&5 %
Holmes, Booth & Hayden.....dis 40&10&5 %
Brown Bros.....dis 40&10&5 %
Wallace's Steel Silver Plated.....dis 33⅓&10 %
Rogers Bros 1847.....dis 50 %
C. Rogers & Bro.....dis 40, 10&5 %

SILVER PLATED HOLLOW WARE.

Wm. Rogers Manf. Co.....dis 40, 15&5 %
Meriden Brittania Co.....dis 33⅓ %

SOLDERING IRONS AND COPPERS.

Covert's Soldering Irons.....dis 35 %
Covert's Adjustable Coppers.....dis 35 %

SPOONS.

Britannia.....dis 60&10 %
Tinned, Iron, Table and Tea.....dis 65 %
Tinned Iron Basting.....dis 65 %
German Silver.....dis 40 %

STONE.

Hindostan No. 1, 5c.; Axe, 8c.....net
Sand Stone.....⅊ lb., 6c., dis 33⅓&10 %
Washita Stone.....No. 1, ⅊ lb., 16c. net.
Washita Stone, Slips.....No. 1, ⅊ lb., 45c. net.
Arkansas.....$1.50 ⅊ lb., net

SQUARES.

Steel....dis 60&10 %; full cases, dis 60&10&10 %
Iron.....dis 60&10 %; full cases, dis 60&10&10 %
Nickel Plated.....add $2.50&$4 ⅊ doz net.
} 2 % cash.
Try Square and T Bevels.....dis 50&10 %
Disston's Try Square and T Bevels.....dis 40 %

TACKS, BRADS, &C.

[Less 10&2 % for cash if paid by 6th of month following sale.]

American Iron Carpet Tacks, all kinds.....65 %
Steel Carpet Tacks, all kinds.....60 %
Swedes Iron Carpet Tacks, all kinds.....60 %
Swedes Iron Tacks.....60 %
Swedes Iron Upholsterers' Tacks.....60 %
Tinned Swedes Iron Tacks.....60 %
Tinned Swedes Iron Upholsterers' Tacks.....60 %
American Iron Cut Tacks.....55 %
Gimp and Lace Tacks.....50 %
Tinned Gimp and Lace Tacks.....50 %
Copper Tacks.....50 %
Copper Finishing and Trunk Nails.....50 %
Cigar Box Nails.....50 %
Finishing Nails.....50 %
Trunk and Clout Nails.....50 %
Tinned Trunk and Clout Nails.....50 %
Basket Nails.....50 %
Chair Nails.....50 %
Zinc Glaciers' Points.....45 %
Common and Patent Brads.....45 %
Hungarian Nails and Miners' Tacks.....45 %
Tinned Capped Trunk Nails.....30 %
Looking Glass Tacks.....25 %
Picture Frame Points.....25 %
Leathered Carpet Tacks.....25 %
Brush Tacks.....25 %

TAP BORERS.

Common and Ring.....dis 20 %
Ives' Tap Borers.....dis 15&10 %
Enterprise Mfg. Co.....dis 25 %

TOBACCO CUTTERS.

Enterprise Mfg. Co (Champion).....dis 25 %
Wood Bottom.....⅊ doz $12.00, dis 40&5 %
All Iron.....⅊ doz $9.50, dis 40&5 %
Wilson's.....dis 35 %

THERMOMETERS.

Tin Case.....dis 75&10 %
Storm Glasses.....$3.25 ⅊ doz.

TOE CALKS.

Winsted.....⅊ lb 9c. dis 5 %

TRAPS.

Game, Newhouse.....dis 35 %
Game, Oneida Pattern.....dis 60&10&5 %
Game, Blake's Patent.....dis 40&10 %
Mouse, Wood, Choker.....⅊ doz holes, 16c
Mouse, Round Wire.....⅊ doz $1.50, dis 10 %
Mouse Cage, Wire.....⅊ doz $2.50, dis 10 %
Mouse, Catch-em-alive.....⅊ doz $2.50, dis 10 %
Cyclon Mouse.....⅊ doz 75 cts.
Ideal Mouse.....⅊ doz $1.00
Boss.....⅊ doz $9.50
Rat, "Decoy".....⅊ doz $10.00, dis 10 %
Delusion Mouse, per doz.....$1.50

TROWELS.

Lothrops' Brick and Plastering.....dis 25 %
Reed's Brick and Plastering.....dis 15 %
Disston's Brick and Plastering.....dis 20 %
Clement & Maynard's.....dis 20 %
Worrall's Brick.....dis 20 %
Brades & Walby's.....dis 20 %
Garden.....dis 55 %

TRUCKS (WAREHOUSE, &C.)

Handy Truck.....$2.50 net
Penfield Block Co.'s list, 1882.....dis 35 %
Peerless, with Cogs, No. 3.....54 00
Peerless, with Cogs, No. 4.....66 00
Eureka, No. 2.....⅊ doz 42 00

VISES.

Cheney's Combined Vise and Anvil.....dis 30 %
Solid Box—Wilson's.....dis 50&10 %
" Trenton.....dis 45 %
" Iron City Tool Works.....dis 50 %
Manneer Drill Mfg. Co's—
Machinist's Vise.....$36.00 doz. dis. 50 %
Bench—Wilson's.....dis 45 %
" Trenton.....dis 25 %
" Parker's.....dis 20 %
" Prentiss.....dis 25 %
" Bonney's.....dis 35 %
Well Wheels.....dis 60&10&10 %
Stephen's Patent Vises.....

WIRE.

Brass and Copper, list of Jan. 17, 1884.....dis 30 %
Bright and Annealed.....Nos. 0@18, dis 50&10 %
Bright and Annealed.....Nos. 19@26, dis 60&10 %
Bright and Annealed.....Nos. 27@36, dis 70 %
Coppered.....Nos. 0@18, dis 50%
Galvanized, Nos. 0 to 18.....Market list dis 40 %
Tinned, Nos. 0 to 18.....dis 60 %
Tinned Broom Wire, Nos. 18 to 25.....dis 60 %
Annealed Fence, Nos. 8&9.....dis 55 %
Annealed Grape, Nos. 10 to 14.....dis 50@10 %
Fence Staples, Galvanized.....⅊ lb 5c
Japanned Barb Fence.....⅊ lb 4c
Galvanized Barbed Fence.....⅊ lb 5c
Buck Thorn Galvanized.....⅊ lb 5½ c
Picture Wire.....dis 60 %
Clothes Line Wire, Galvanized.....$2.75 ⅊ doz
Wire Cloth, gree , drab and black.....⅊ sq ft 8c net

WRENCHES.

American Adjustable.....dis 45 %
Baxter's Adjustable "S," list Jan., 1880...dis 20&5 %
Baxter's Diagonal.....dis 20&5 %
Coes' Genuine.....dis 60 %
Coes' "Mechanics".....dis 60&10 %
Coes' Pattern, Malleable.....dis 75 %
Coes' Pattern, Wrought.....dis 60&10 %
Girard Standard.....dis 50&10 %
Girard Agl.....dis 60&10 %
Always Ready.....$9.00—25 %

WRINGERS. Per doz.

Universal, XX, No. 2½.....30.00
Universal, XX, No. 2.....39.00
Universal, XX, No. 1½.....48.00
Universal, XX, No. 1.....63.00
Universal, XX, No. 8.....each 10.75
Universal, XX, No. 12.....each 20.25
Universal, XX, No. 18.....each 22.75
Universal, XX, No. 22.....each 30.25
} dis 10 %
Peerless, no Cogs, No. 1.....42.00
Peerless, with Cogs, No. 2½.....45.00
Peerless, with Cogs, No. 2.....48.00

MISCELLANEOUS.

"Diamond" Vegetable Grater.....$5.00 ⅊ doz., 10 %
Rotary Knife Potato Parer.....$18.00 ⅊ doz., net
Metallic Shingles.....$5.50 and $6.50 per square.
Hopper Cherry Seeders.....$5.00 ⅊ doz, net

BEAUDRY'S UPRIGHT CUSHIONED

Power Hammer,
BY FAR THE BEST!
Blow accurate, powerful and elastic. Will increase the profits of any shop.
70 Kilby St.,
BOSTON, MASS.
Beaudry & Cunningham.

METAL-WORKING MACHINERY
New and Second Hand, on Hand.

12 in. S. x 5 ft. Engine Lathes.
15 in. S. x 6 ft. Engine Lathes, Lathe & Morse.
16 in. S. x 6 & 8 ft. Engine Lathes, Harrington & Ames
17 in. S. x 7 & 8 ft. Engine Lathes, Hewes & Phillips
18 in. S. x 8 & 10 ft. Engine Lathes, New Haven.
20 in. S. x 8, 10 & 14 ft. Engine Lathes, Harris & Ames
24 in. S. x 14 & 20 ft. Engine Lathes, Ames.
25 in. S. 10 ft. Engine Lathes.
26 in. S. x 16 ft. Engine Lathes, Perkins.
41 in. S. x 18 ft. Engine Lathes, Putnam.
50 in. in Gap Extension Bed Engine Lathes, Box.
12 in. Stroke Shapers, New Haven & Eungst.
15 in. Stroke Shapers, Wolcott & Eberhardt.
20 in. Stroke Shapers, Eberhardt.
24 in. Stroke Shapers, Bridgeport.
20 in. x 20 in. x 4 ft. Planer, New Haven.
20 in. x 20 in. x 6 ft. Planer, Whitcomb.
20 in. x 20 in. x 6 ft. Planer, Pratt & Whitney.
22 in. x 22 in. x 4 ft. Planer, Powell.
22 in. x 22 in. x 5 ft. Planer, Ames.
24 in. x 24 in. x 4 ft. Planer, Ferris & Miles.
24 in. x 24 in. x 6 ft. Planer, Powell.
24 in. x 27 in. x 7 ft. Planer, Ames.
26 in. x 26 in. x 6 ft. Planer, Powell.
26 in. x 26 in. x 6 ft. Planer, Putnam.
30 in. x 30 in. x 10 ft. Planer, National.
20 in. Swing Drill, Prentice.
25 in. Swing Drill, Blaisdell.
28 in. Swing Drill, Blaisdell.
3 and 4 Spindle Drill, Garvin.
Brown & Sharpe Universal Miller.
Plain Miller, Lincoln Pattern.
No. 3 Miller, Garvin.
No. 5 Miller, Brainerd.
2½ in. Cutting-off Machine, Pratt & Whitney.
No. 2—3½—4 Stiles Punch Presses.

Also a line of New Tools all kinds. We are always glad to correspond, and if parties desiring to purchase will write, stating just what they want, we will be glad to name prices on either new or second hand.

E. P. BULLARD,
No. 14 Dey Street, New York.

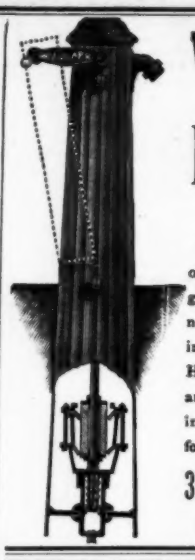
BRADLEY'S HEATING FORGES.

ESTABLISHED 1832.

For Hard Coal or Coke. Indispensable in all shops to keep **Bradley's Cushioned Hammers** and men fully employed and reduces cost of production.

BRADLEY & CO. Syracuse, N.Y.

WOOD ENGRAVING ELECTROTYPING AND PRINTED SUPPLIES
Manufacturers, Wood Engraving, Electrotyping and Printing.
Publishers of The Manufacturers' Exchange.
A. MUGFORD, Hartford, Conn.



W. J. CLARK & BRO.
Manufacturers of
Hydrants.

These Hydrants are made of the best material, and are guaranteed to be entirely non-wasting and non-freezing. The works of these Hydrants can be taken out and repaired without breaking the ground. ☞ Send for circular.

38 N. Holliday Street,
BALTIMORE, MD.

BUCKEYE
BOILER & BRIDGE WORKS,
CLEVELAND, OHIO.
Manufacturers of all Kinds of
WROUGHT IRON BRIDGES.
also, BOILERS, TANKS, STILLS,
BLAST FURNACES,
and all kinds of Plate Work,
Jail Cells, Bank Vaults,
and HEAVY GIRDERS for Buildings.
Estimates Furnished upon Application.

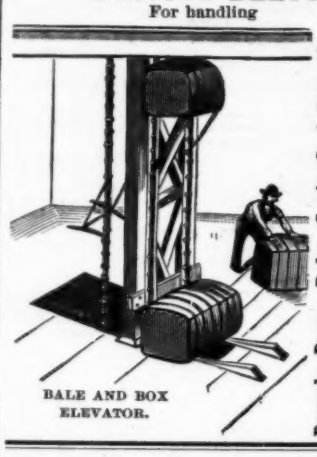
Established 1793.
H. BALDERSTON & SON,
MANUFACTURERS OF
WIRE GRATING FOR WINDOWS
Doors and Office Railing, Wire Screens for Banks, Churches and Store-Fronts. Woven Wire, Wire Tree-Guards, Sieves, Screens for Coal, Sand, &c.
66 S. Calvert Street, Baltimore.

WIRE RAILING
and Ornamental Wire Works.
DUFUR & CO. 36 N. Howard St., Baltimore.
Wire Railing for Cemeteries, Lawns, Gardens, Offices and Balconies; Window Guards, Tree Guards, Wire Cloth, Sieves, Fenders, Cages, Sand and Coal Screens, Iron Bedsteads, Chairs, &c.

LOUISVILLE HOTEL,
LOUISVILLE, KY.
STRICTLY FIRST CLASS.
MOST CONVENIENT TO
DEPOTS AND BUSINESS
PORTION OF CITY.
CUISINE UNEXCELLED.
New Furniture & Modern Improvements.
LOUISVILLE HOTEL CO., PROP'S,
A. SOULE, Manager.

THE BAY LINE
FOR
FORTRESS MONROE, NORFOLK and the SOUTH.
The Bay Line comprises the New and Elegant Steamers
"VIRGINIA," "CAROLINA" and "FLORIDA."
All the Comforts and Luxuries of a First-Class Hotel are afforded the Traveler. Spacious and Elegant Saloons and Staterooms, furnished with an especial view to comfort. Unsurpassed Cuisine, which is made a specialty with this Line. Elegant service and courteous attention. Steamers leave Baltimore daily except Sundays at 9 P. M.
At Old Point Comfort is located the SPLENDID HYGEIA HOTEL, a Delightful Resort at all Seasons of the Year. For Tickets and Information, apply at Company's office,
157 W. BALTIMORE ST., BALTIMORE,
Or on Board of Steamers.
D. J. HILL, Superintendent.
E. BROWN, General Ticket Agent.

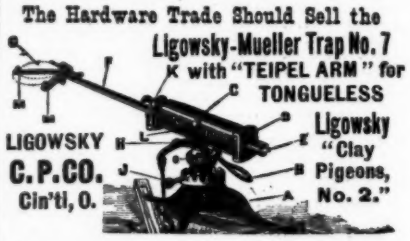
Roller Chain Belting Co., Columbus, O.
MANUFACTURERS OF
ELEVATORS, CONVEYERS
DRIVING BELTS
For handling



BALE AND BOX ELEVATOR.

Barrels, Boxes, Bales, Grain, Coal, Ores, &c.
Illustrated Catalogue sent on application.
Correspondence solicited.

The Hardware Trade Should Sell the
Ligowsky-Mueller Trap No. 7
with "TEIPEL ARM" for TONGUELESS



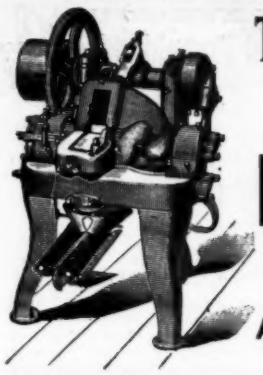
LIGOWSKY C.P.CO. Cin'ti, O.
Ligowsky "Clay Pigeons, No. 2."

ESTABLISHED 1860.
KREHL, HAUSER & CO.
TANNERS OF
OAK Leather.
ALSO MANUFACTURERS OF
Leather Belting,
Girard, Trumbull Co., Ohio.
SPECIALTIES—Harness, Black and Fair Bridles, Line Leather, Saddle and Shoe Skirting, Russett and Stained Rein Welt, Fly-Net and Collar Leather. Superior Harness Backs. Write for prices.
☞ Mention this Paper.

TOOLS for Machinists, Amateurs, Jewellers, Model Makers, Blacksmiths, Carpenters, Coachmakers, etc.
Send 30 cts. for new Metal Worker's Catalogue, 500 Pages.
Wood Worker's Catalogue free.
FALLMAN & McFADDEN, Philadelphia, Pa.

Established 1867.
E. Harrington, Son & Co.
Works and Office,
N. 15th St. & Penna. Ave.
Phila., Pa., U. S. A.
Manufacturers of a full line o
Iron-Working MACHINERY,
INCLUDING
Extension and Gap Lathes, Planers with Quick Return, Drills, &c., Hand Power Elevators with Patent Brake, Double Chain Screw Hoists, OVERHEAD TRAMWAY, with Switch, Turntable and Geared Truck.
Gear Cutting a Specialty.
Send for estimates.

Represented by J. Q. MAYNARD, 12 Cortlandt St., N.Y. C. E. KIMBALL, 93 Oliver St., Boston; W. BUCHNER, 102 Main St., Cincinnati.



The American Nail Machine Co.

MANUFACTURERS OF

AMERICAN PATENT

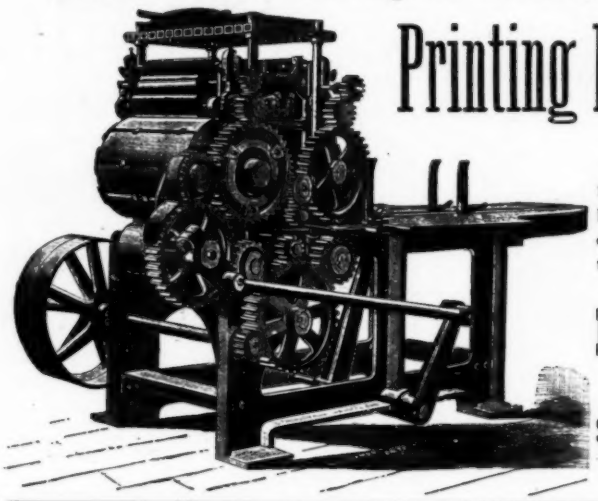
Improved Cut Nail Machines,

AUTOMATIC NAIL SELECTORS and NAIL FACTORY SUPPLIES,

ASHTABULA, - - - - OHIO.

Prices and particulars furnished on application.

Patented Two-Color Packing Box and Advertising Sign



Printing Machine.

Feeds automatically from 1,500 to 1,800 per hour, and prints both colors in perfect register at one operation.

F. X. HOOPER,

Nos. 8 to 14

Second Street,

BALTIMORE.

The Little Giant Excavator.

——A LONG FELT WANT SUPPLIED.——

For DITCHING, EXCAVATING

Loading Wagons and Cars, Etc.

50 TO 100 PER CENT. SAVED IN LABOR.

Capacity of Machine 500 to 700 cubic yards per day. Self propelling. Easily moved. Being built entirely of steel, is both strong, light and a very substantial machine. Can be used on flat-boat for dredging ditches, irrigating or digging canals. Contractors and railroads promptly furnished with estimates for excavators of every description.

Address VULCAN IRON WORKS, Toledo, Ohio.

The True Idea of Assurance.

Women's Mutual Insurance and ACCIDENT COMPANY.

OFFICERS AND DIRECTORS:

ELIZABETH B. PHELPS, *Pres.*
MARGARET HOLCOMBE, *Vice-Pres.*
EMILY TAYLOR, *Treas.*
CORNELIA KAMPING, *Actuary.*
Elizabeth S. Roberts, H. Louise Gates, *Secretary.*
Charlotte Mulligan, M. F. Hoagland.

MEDICAL EXAMINERS.

ALFRED K. HILLS, M. D., 465 Fifth Avenue. MARY PUTNAM JACOBI, M. D., 119 W. 34th Street

JOHN A. KAMPING, Attorney and Counsel, 128 Broadway, New York.

Incorporated under the Laws of New York.

ITS OBJECT.

This company is the pioneer in throwing down the bars of unjust discrimination against women in life insurance. Statistics and common observation prove mortality to be in favor of females at every age, and married as well as single. To remove this prejudice, and to secure to women an equal estimation in her insurability, the promoters of this enterprise have devoted themselves. Consistently with this principle **WOMEN AND MEN** are equally insured in this company without discrimination on account of sex.

ITS MEMBERSHIP

comprises persons between the ages of 16 and 60, of approved physical condition. The Life Class is separate and distinct from the Accident Class, members being liable for losses only occurring in the class to which they belong.

ITS PLAN

secures insurance at cost, and embraces the best features of similar associations, with such improvements added as enlightened experience has shown to be desirable for the member's advantage and the security of the association.

ITS SAFETY AND SECURITY

consists in its **ECONOMICAL** system, its **IMPOSSIBILITY** of insolvency, and its **SECURITY RESERVE FUND.**

FINALLY.

This company avoids complicated schemes and plans by means of which impossible results are promised. Its contracts are plain, easily fulfilled and liberal. It issues the following forms:

1. *Ordinary Life Policy*, $100 *to* $10,000.
2. *Ordinary Accident Policy*, $5,000 *death indemnity*; $25 *weekly.*
3. *Combined Life and Accident Policy.*
4. $500 *Savings Bond.*

BANKERS:

BANK OF THE METROPOLIS, New York City.

DEPOSITORY OF RESERVE FUND:

FARMERS' LOAN AND TRUST CO., New York City.

The officers would be pleased to furnish any further particulars which may be desired in relation to the Company's affairs, or the way to obtain a policy.

Agents are desired in every city, village and district throughout the healthful sections of the country.

Address all communications to the

WOMEN'S MUTUAL INSURANCE AN ACCIDENT CO.,
128 BROADWAY, NEW YORK

THE MANUFACTURERS' RECORD

IS THE FOREMOST EXPONENT OF THE INDUSTRIAL INTERESTS OF THE SOUTH.

MONON ROUTE

Louisville, New Albany & Chicago Railway Company

The Pullman Car Line between **CINCINNATI, INDIANAPOLIS, CHICAGO**

AND THE NORTHWEST.

2 FAST EXPRESS TRAINS LEAVE CINCINNATI

From Station, cor. 5th and Hoadly Sts. (Central Time.)

7.35 A. M. CHICAGO DAY EXPRESS. (Except Sunday) For Indianapolis, Monon, Frankfort, Michigan City, Chicago, Milwaukee, St. Paul, Minneapolis and all points in the Northwest.

6.45 P. M. CHICAGO NIGHT EXPRESS (Daily) For Indianapolis, Chicago, Milwaukee, St. Paul, Minneapolis, Omaha, Council Bluffs, Davenport, Rock Island and all points in the Northwest.

PULLMAN SLEEPING CARS AND DAY COACHES THROUGH TO CHICAGO. BAGGAGE CHECKED TO ALL POINTS IN NORTHWEST.

JOHN H. GARRISON, General Southern Passenger Agent, 129 Vine Street, Burnet House Block, CINCINNATI.

JOHN B. CARSON, Vice-President and General Manager, CHICAGO. **WM. S. BALDWIN**, General Passenger Agent, CHICAGO.

SHENANDOAH VALLEY ROUTE.

Traversing the most Picturesque Section of America, replete with Scenes of Historic Interest and

NATURAL BEAUTY.

The Popular Trunk Line and Most Desirable Route for TOURISTS AND TRAVELERS

Between the North and South.

STOP-OVER ALLOWED ON ALL TICKETS AT LURAY and NATURAL BRIDGE AND OTHER POINTS OF INTEREST.

O. HOWARD ROYER, Gen'l Pass. & T'k't Ag't, ROANOKE, VA.

The Ohio and Mississippi Railway

IS THE BEST LINE FROM

CINCINNATI TO ST. LOUIS OR LOUISVILLE.

Four Solid Daily Trains to St. Louis. Two Daily Trains to Evansville
Four Solid Daily Trains to Louisville.
Two Daily Trains, having Through Cars to Cairo and New Orleans.

THE SHORTEST AND QUICKEST ROUTE WEST.

10 Hours Only to St. Louis. 4 Hours Only to Louisville.
8 Hours Quicker Than Chicago Lines to Omaha.

The Only Line running a Sleeping Car of any description from Cincinnati to St. Louis

"THE O. & M." ALWAYS makes fast time and sure connections with all Lines in Union Depots, running all trains through solid between Cincinnati and St. Louis, and is therefore the recognized first-class route between those points. For tickets, rates, or any particular information call at 48 W. 4th St., Grand Hotel or Grand Central Station, Cincinnati, Ohio.

C. W. PARIS, Passenger Agent. W. W. PEABODY, Prest. and Genl. Manager.
W. B. SHATTUC, General Passenger Agent.

CHESAPEAKE & OHIO RAILROAD

Leave Washington, B. & P. Station:

5.30 P. M.—Every day, Fast Express. Only solid train between Washington and Louisville with Pullman Palace Cars. Pullman Cars to Cincinnati.

11.15 A. M.—Every week day. Mail for principal Virginia Cities and Lexington, Ky., Cincinnati, Louisville and the West.

11.00 P. M.—Every week day—Virginia Springs Express. Pullman Sleeping Cars from Baltimore and Washington to White Sulphur Springs.

CHESAPEAKE & OHIO TICKET OFFICE IN WASHINGTON, 513 PENNSYLVANIA AVENUE.

H. W. FULLER, GENL. PASSENGER AGENT.

W. C. WICKHAM, 2D VICE-PRESIDENT, RICHMOND, VA.

C. H. & D. R. R.

Cincinnati, Hamilton and Dayton Railroad.

From and to CINCINNATI.

TOLEDO, SAGINAW, NIAGARA FALLS, DETROIT, TORONTO, AND ALL POINTS IN MICHIGAN AND CANADA.

CONNERSVILLE, RUSHVILLE, DANVILLE, BLOOMINGTON, INDIANAPOLIS, DECATUR, PEORIA, AND ALL POINTS WEST and Northwest.

RICHMOND, LOGANSPORT, DELPHI, CHICAGO, MONON, AND ALL POINTS IN THE NORTHWEST.

FORT WAYNE, KALAMAZOO, PETOSKEY, GRAND RAPIDS, MACKINAW, AND ALL POINTS IN MICHIGAN.

PULLMAN PALACE SLEEPERS AND PARLOR CARS.

For information apply at any Railroad Office in the United States or Canada. In Cincinnati, Ohio, at Offices: N. W. Corner Fifth and Vine Streets, or Depot, Fifth and Hoadly Streets, or address

J. F. McCARTHY, J. R. McCORD, C. L. PARIS. } Agents at 5th and Vine Sts., Cincinnati, O.

SAM'L STEVENSON, General Ticket Agent.

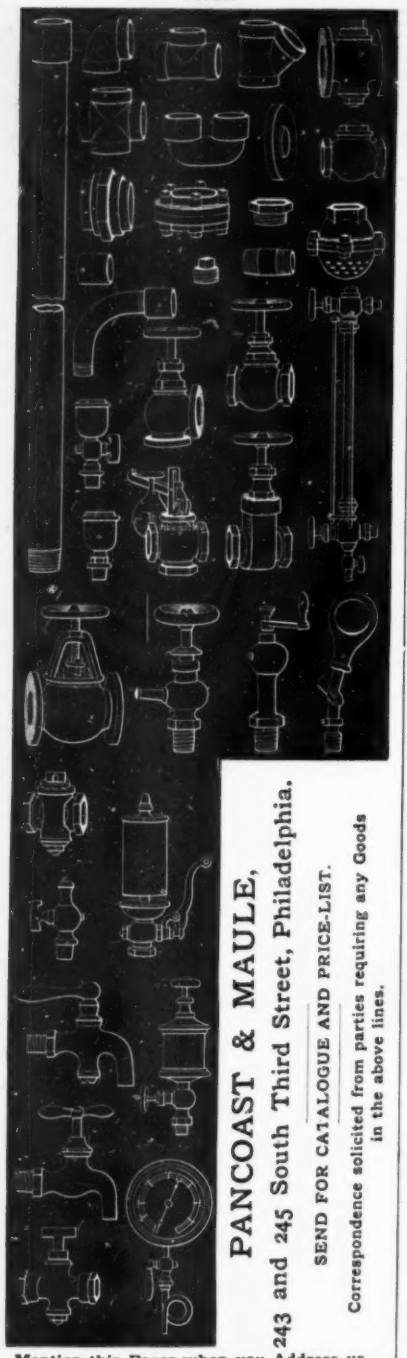
S. W. RITTER, Millwright,

——BUILDER OF——

Flour and Saw Mills, Drug and Chemical Works, Portable Mills, Smut Machines, Mill Stones, Bolting Cloths, Brushes, Guano Fertilizer Mills, and General Mill Supplies,

261 S. Caroline Street, BALTIMORE, MD

No. 20.



PANCOAST & MAULE,
243 and 245 South Third Street, Philadelphia.
SEND FOR CATALOGUE AND PRICE-LIST.
Correspondence solicited from parties requiring any Goods in the above lines.

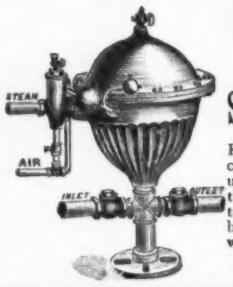
Mention this Paper when you Address us.

TAPER-SLEEVE PULLEY WORKS,

No. 211 W. 12th Street,
ERIE, PA.

Manufacturers of Taper-Sleeve Wood Belt Pulleys, Adjustable Dead Pulleys, Friction-Clutch Pulleys, Friction

Clutch Couplings, Wood Pulleys in Halves, Taper-Sleeve and Compression Couplings Shafting, Post and Drop Hangers.
Correspondence Solicited.
Friction-Clutch Pulley.



THE CURTIS RETURN STEAM TRAP

For returning steam condensed under pressure automatically into the boiler, whether taken from above or below the boiler level, without loss or waste.

MANUFACTURED BY

THE CURTIS REGULATOR CO.

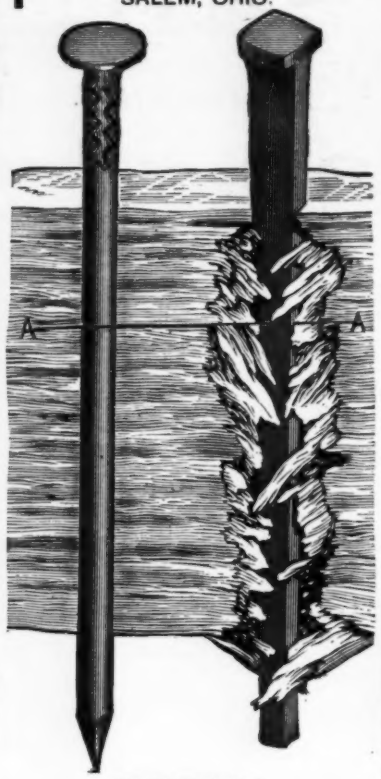
158 BEVERLY ST., BOSTON, MASS.

—GENERAL AGENCIES:—

109 Liberty St., New York; **No. 707** Market St., St. Louis; **14** S. Canal St., Chicago; **66** North 4th St., Philadelphia, Pa.

The Salem Wire Nail Co.

SALEM, OHIO.



MANUFACTURERS OF

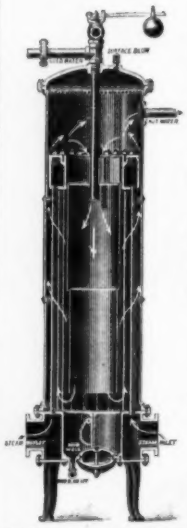
Wire and Wire Nails

HEADQUARTERS FOR PENNY WIRE NAILS.

THE GOUBERT PATENT

Feed-Water Heater

AND PURIFIER.



Can be thoroughly cleaned without taking it apart.

Has a positive device for the prevention of **Back Pressure.**

Purifies the water better than any other exhaust steam heater.

Has a positive circulation, making all parts of the heating surface equally effective.

Brass Tubes Free to Expand.

Efficient and Durable.

For Circulars and Specifications, address

The Goubert Manfg. Company,

5 BEEKMAN STREET, NEW YORK.

1837. NOVELTY WORKS. 1886.

JAMES MURRAY & SON,

Machinists and Millwrights

Engines and Boilers, Mills of all kinds, Marine Railways, &c. Improved Clay Tempering Machinery, Steam or Horse Power. Phosphate Machinery, Crushers, Rollers, Mixers, &c., &c.

40, 42 & 44 York Street,

NEAR LIGHT, BALTIMORE.

☞ Repairing of all kinds promptly done.

—ESTABLISHED 1865.—

Steam Boilers

JOHN T. COLEMAN & SONS,

Steam Boiler Works,

Cor. Holliday and Pleasant Sts., Baltimore.

Manufacturers of all kinds of Steam and Bath Boilers Smoke Stacks, Water Tanks, Lard Kettles, &c
☞ Particular attention given to repairs.

Bates' Hand Elevators.

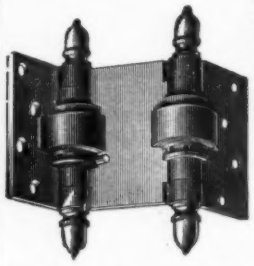
Patented April 18, 1871. Reissued July 25, 1876.

OVER 6,000 IN USE.

Adapted for Warehouses, Stores, Factories, Hotels. Public Institutions, and every place where merchandise, &c., is transferred from one story to another.

JAMES BATES, Patentee,

Nos. 1 3 & 5 President Street. BALTIMORE.



UNION SPRING HINGES

are Simple, Easily Set.

Cannot be put on wrong. They work either way, right or left. All sizes. Single or double acting. For Wire Screens and Light Doors they have no equal. Send for Price List. M. W. ROBINSON, Sole Agent, 79 Chambers St., New York.

$250 WILL BUY

THE BEST

SAWMILL

Yet offered for the money.

☞ *SEND FOR CIRCULAR.*

RICHMOND MACHINE WORKS,
RICHMOND, INDIANA.

THE BRADSTREET

Mercantile Agency

HAS NOW BEEN

Under its present successful management for the past seven years.

And during that time its business has more than trebled, while its facilities have proportionately increased.

No expense is considered too great in obtaining and applying to the conduct of the business all possible improvements. With its present system for obtaining and promulgating information, this Agency is justly regarded by its patrons as authority on all matters affecting commercial credit. Its ramifications are greater and its business larger than any similar organization in the world conducted in one interest and under one management.

You are respectfully invited to investigate, and if in need of an Agency, to test its ability to serve you.

CHAS. F. CLARK, President.
Baltimore Office,—American Building,
H. KERSHAW, Supt.

ARCTIC ICE MACHINE MFG. CO.

Works, 4, 6, 8 & 10 West Street, Cleveland, O.

Manufacturers of Machines for Making Ice and for Refrigerating Breweries, Pork Houses and buildings of all kinds requiring a steady, low temperature. Over 100 of our machines now in use. Send for any particulars desired. *P. O. Box 92, Cleveland, Ohio, or P. O. Box 348 Cincinnati, Ohio.*

HUGH SISSON & SONS,

210 E. Baltimore St., bet. North & Calvert Sts.,

BALTIMORE.

MANUFACTURERS OF

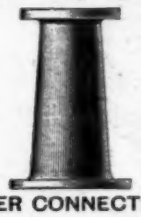
Marble Monuments

Tombs, Altars, Counters,
Furniture Slabs, Mantels, Tiles.

Estimates and Drawings Free.

WEBBER'S

Centrifugal Pumping Machinery.



TAPER CONNECTIONS

For Coupling Pumps to larger sized Suction and Discharge Pipes.

The use of the Taper Connections and a suction and discharge pipe of larger diameter than the discharge orifice of pump, will increase the efficiency of pump from 5 to 8 per cent.

THE LAWRENCE MACHINE SHOP,

LAWRENCE, MASS.

Sales Department conducted by JOHN POST, JR., & Co., Mason Building, Boston, Mass.; CHAS. W. LIVERMORE, 111 Broadway, New York City; FAIRBANKS & CO., 302 and 304 Washington Ave., St. Louis, Mo.; H. P. GREGORY & CO., 2 and 4 California St., San Francisco, Cal.; JOHN S. MOORE, 169 Gravier St., New Orleans, La.

Roller Chain Belting

Detachable in every Link,

FOR IMPROVED

ELEVATORS,

Conveyers,

AND

DRIVING BELTS.

FOR HANDLING

Coal, Ores, Grain,

CLAY, BRICK, &c.

ADDRESS THE

Roller Chain Belting Co.

COLUMBUS, OHIO.

Also Manufacturers of the Legg Coal Mining Machines and Rotary Power Coal Drill.

Send for Illustrated Catalogue.

DON'T BUY AN ENGINE —OR— BOILER

Until you have seen our circulars. **Engines complete from**

$250 for 15 Horse Power TO $550 for 60 Horse Power

Boilers of every style. Automatic Engines for Electric Lights. Centrifugal Pumping Machinery for Drainage or Irrigation. Established 22 years. *Perfect satisfaction guaranteed.* Address for circulars,

MORRIS MACHINE WORKS, Baldwinsville, N.Y.

Improved Law's Pat. Combined Sawing & Heading Machine.

FOR THE BEST

MACHINERY

—FOR—

SHINGLES,

HEADING and STAVES,

And Improved

GAGE LATHES

For

Turning Handles, Etc.

ADDRESS:

TREVOR & CO.

LOCKPORT, N. Y.

MANEER'S XXX

Post Drill,

(SELF-FEED.)

A new machine for *Blacksmiths, Wagon Makers and Small Machine Shops.* Can drill from ⅛ to 1 in. hole true and square with bed plate. Frame is rigid and well proportioned. For convenience and great service it has no superior. It runs easy and smooth. All parts interchangeable.

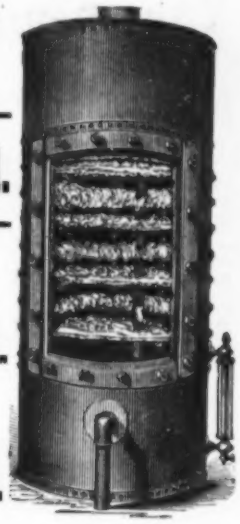
During a limited time this machine will be *sent on trial at a special low price.* Write for terms and full description. Don't purchase until you try this machine. Address,

Manneer Drill Mf'g. Co.

ROCHESTER, N. Y.

Stilwell's Patent

Lime Extracting **HEATER AND FILTER** Combined.



The Only Lime Extracting Heater That Will Prevent Scale in Steam Boilers.

Removing all impurities from the water before it enters the boiler.

Thoroughly Tested. Over 3,000 of Them in Daily Use.

This cut is a facsimile of the appearance of a No. 5 Heater at work on ordinary lime water, when the door was removed after the Heater had been running two weeks. ☞Illustrated Catalogue Free.

STILWELL & BIERCE MFG. CO., DAYTON, O.

MECKLENBURG IRON WORKS, *Charlotte, N. C.*

BUILDERS OF { *ENGINES and BOILERS, STAMP MILLS,* CRUSHERS, Circular Saw and Grist Mills, CORNISH PUMPS,

MINING MACHINERY.

Cotton Presses, Water Wheels, Shafting and General Machinery. JOHN WILKES, Manager.

SAM. F. HARLAN,
LOUISVILLE STEAM PUMP WORKS.
Harlan's Improved Tube Well Pumps
Combined with the famous Cook Strainer, for Manufacturers and Private Use.
All kinds of Pumps Repaired, also, Blacksmithing and General Jobbing Shop, Awnings, &c. Cistern and Well Pump Manufactory.
921 W. Jefferson St., LOUISVILLE, Ky.

BERNHARD DIETZ, Manufacturer of **Printers' Rollers,** and Roller Composition. Factory, cor. Light and Mercer streets, Baltimore. Prices: Composition, (bulk) 30 cents per lb.; for Casting, also, 30 cents per lb. Orders by Mail promptly attended to.

BRUSH LIGHT

—*FULL PARTICULARS REGARDING*—

Incandescence AND Arc.

Electric Lighting Systems Furnished by writing for CATALOGUE No. 13 to **The BRUSH ELECTRIC CO., Cleveland, Ohio.**

R. R. ROUSE PATENT ELECTRO-PLATED WELL POINT.

1¼	1½	2	
$1.50	$2.50	$6.00	
2½	3	4	6
$9.00	$12.00	$35.00	$75.00

My 1¼ Point is 24½ in. long and has 24 1¼ by ⅜ openings.

A B C

A showing the openings before the wire gauze is soldered on. **B** after wire gauze is soldered on. **C** showing wire gauze and perforated brass soldered on. These 1¼ Points (caliber) are Electro-Plated, with Pure Block Tin inside and outside before receiving the coverings, there being no raw iron to corrode or rust or cause an unpleasant taste in the water. The Electric Process by which it is done is patented and exclusively owned and controlled by me for Driven Well Points in the United States. Warranted not to strip loose where soldered. Write for discounts and circular. **R. R. ROUSE, INDIANAPOLIS, IND.**

McShane ✣ Bell ✣ Foundry

Fine Iron and Brass Castings Made to Order.

Manufacture those celebrated **Bells for Tower Clocks, Court-Houses, Cotton Mills, Factories, &c.** Prices and catalogues sent free. Address **H. McSHANE & CO.** **Baltimore, Md.**
Mention this Paper.

The York Ice and Refrigerating Machines

York Mfg. Co. *YORK, PA.*

THE RELIANCE ALARM GAUGES take the place of water columns and hence cost but little more than an ordinary arrangement. Send for Illustrated catalogue and investigate their merits before buying anything of the kind. They are superceding old gauges wherever known. Agents wanted everywhere. RELIANCE ALARM GAUGE CO., Sole Manufacturers, Cleveland, O.

The Manufacturers' Record

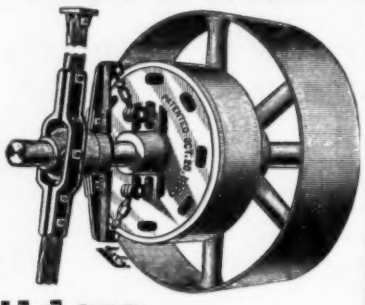
is the most thorough, complete and authentic source of information on Southern industrial affairs in existence. The subscription price is only $3.00 a year. Some of our subscribers think every issue is worth that much. Try it for a year. Send in your subscription *to-day*. Don't wait until to-morrow; you may forget it.

Kaestner Patent Friction Clutches

A Perfect Friction Clutch,

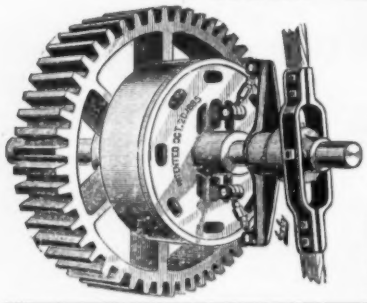
SIMPLE and DURABLE.

Has largest friction surface and most perfect toggle and levers. Can be attached to Pulleys, Gears, Sprocket Wheels, or used for Shaft Couplings. 30 sizes, from 5 to 1,000 horse power. Will run at any speed, and is specially designed for running Electric Dynamos.



CHAS. KAESTNER & CO.

—Sole Builders,—



MACHINISTS and FOUNDERS

And Builders of
General and Special Machinery,

303 to 311 S. Canal St.

CHICAGO, ILL.

In ordering Clutches, state size and speed of shaft, and power wanted. We desire specially to place them on trial where all other Clutches have failed to please. We build them singly and in pairs, and furnish the Clutches, or Pulleys and Gears with Clutches attached. Write for catalogue and prices. Mention this paper.

The Spiral Pug Mill

—‡ AND ‡—

QUAKER BRICK MACHINE.

Capacity 40,000 Perfect Brick Per Day

Great Saving in Labor and Expense!

We contract to furnish complete Brick-yard outfits,—Engines and everything needed complete. Write for our handsomely illustrated catalogue, containing valuable information. Estimates furnished. Correspondence solicited. Address

FLETCHER & THOMAS, Indianapolis, Ind.

Mention MANUFACTURERS' RECORD.

PATAPSCO 196 SUPERLATIVE PATENT C.A.GAMBRILL Mfg. Co. BALTIMORE.

Patapsco FLOURING MILLS.

—ESTABLISHED 1774.—

This Company owns and operates three Mills, as follows:

Patapsco Mill A, at Ellicott City, Md.
Patapsco Mill B, at Baltimore, Md.
Patapsco Mill C, at Orange Grove, Md.

—Having a daily capacity of **1,800** barrels.—

The value of Flour depends on the proportionate quantity of Gluten, Starch, Sugar and Phosphate of Lime. Maryland and Virginia Wheat, from which our **PATENT ROLLER FLOURS** are manufactured, is unequalled for its purity and superior quality of alible properties.

ASK YOUR GROCER FOR

PATAPSCO SUPERLATIVE, PATAPSCO CHOICE PATENT, PATAPSCO FAMILY, PATAPSCO EXTRA, CAPE HENRY FAMILY, NORTH POINT FAMILY, CHESAPEAKE EXTRA, BEDFORD FAMILY, ORANGE GROVE EXTRA

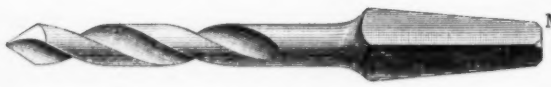
C. A. GAMBRILL MNF'G CO.

Office, 32 Commerce St., Baltimore, Md.

SYRACUSE TWIST DRILL CO., Syracuse, N. Y., U. S. A.

Manufacturers of **TWIST DRILL BITS**

For WOOD and METAL.



Measuring Machines, Comparators, Reamers, Drill Chucks, Tool Holders and Special Tools.

Send for Illustrated Catalogue and Prices.

WALKER MANFG. CO.

Shafting, Hangers, Pulleys.

Pulley Castings and Machine-Molded

GEARING

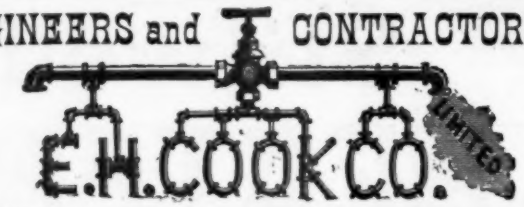
A SPECIALTY.

Cleveland, - Ohio.

Estimates furnished. Write for Gear and Price-Lists A.

We offer you the experience of 15 years, unbiased by interest in any patent. Write us. We will make specifications for you or do your work, or both.

ENGINEERS and CONTRACTORS.



WARMING.

Steam & Hot Water.

ROCHESTER, N. Y.

Hot Water is the system for the South. Correspondence invited. Economy. Efficiency. Durability. Best Methods. Housework a Specialty. 500 References.

WARMING AND VENTILATION.

A Perfect Success by Our Apparatus.

24 SIZES

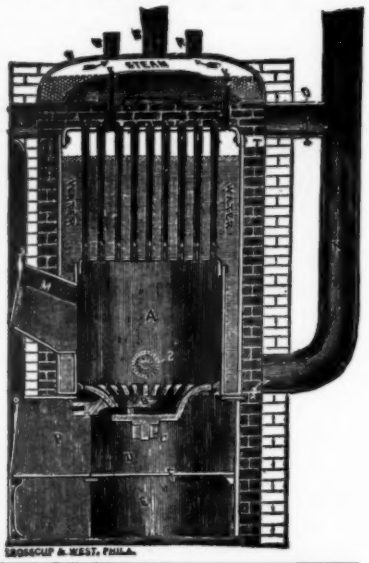
Low Pressure Generators

PRETTIEST DIRECT RADIATION.

LARGEST MANUFACTURERS OF INDIRECT AND WINDOW RADIATION.

LIGHT'S PATENTS

The Most Popular with the Trade. Descriptive and Trade Circulars on Application. Plans and Estimates by a Skilled Engineer.



EUREKA Steam Heating Co.

202 State St. ROCHESTER, N. Y.

Our sales from year to year have doubled with good satisfaction everywhere. Send for Circulars.

Perfection × the × Result × of × Experience.

PERFECT

Steam Heating

COMBINING

Elegance, Comfort, Durability, And Perfect Ventilation.

Public Buildings, Fine Residences, And Factories

Warmed by Low Pressure or Exhaust, Steam or Hot Water.

Also, Factories protected against Fire and at a **25% REDUCTION OF INSURANCE** by the use of **The Grinnell Automatic Fire Extinguishers.**

For circulars or estimates address,

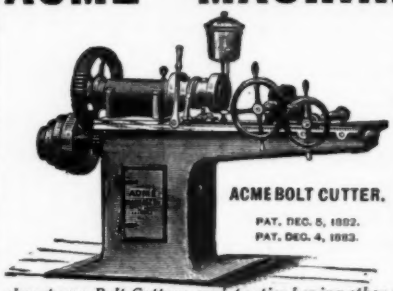
Cincinnati Steam Heating Co.

187 W. Pearl St., Cinn., O.

Over 800 References, North and South.

ACME MACHINERY COMPANY,

CLEVELAND, OHIO.



Advantages of the "Acme" Bolt Cutter:

Large bearing on top of Dies by using a Cap. Fine adjustment by differential screw. Positive Toggle Lock. Die-ring connected to Barrel. Positive Motion. Every part exposed to view, it cannot clog with chips or scale. Quickness of changing Dies, (in less than a minute.) No springs used. Index on Head so a fit can be cut at once. Cheapness of Dies. Advantage of Plain and not the disadvantage of Case Dies. Reversible Dies. Even number of Dies and ahead of center. All wearing parts are tempered Steel, made to Jigs and Standard Gages, and are interchangeable Dies cut in one Head will fit any other, and where more than one Head is used this is a very vital point. *The ACME Head can be put on almost any Bolt Cutters, and parties having other make of machines will find a great improvement by putting an "ACME" Head and Dies on it.*

JOSEPH B. MATTHEWS & CO.

Engineers and Machinists

41 CENTRE MARKET SPACE,

BALTIMORE MD.

CORDESMAN, MEYER & CO.

171 and 173 West Second Street, CINCINNATI, OHIO.

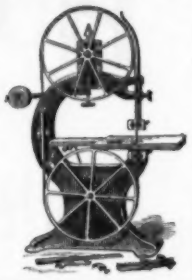
—FINE GRADES OF LATEST—

Wood Working Machinery

OF EVERY DESCRIPTION.

Planing Mills, Furniture and Chair Factories, Carriage, Wagon and Agricultural Works.

Write for our latest Catalogue and Price List. Correspondence solicited.



STEARNS MNFG. CO., ERIE, PA.

BUILDERS OF

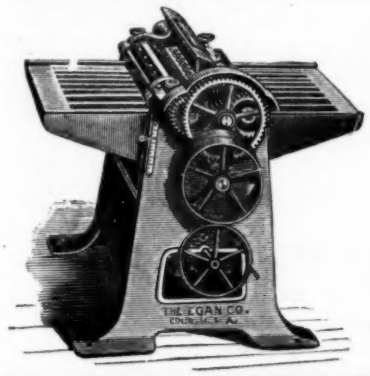
Capacity 15,000 to 450,000 feet per day. **CIRCULAR SAW MILLS** Complete outfits planned and furnished.

ENGINES, 15 to 800 Horse-Power. **BOILERS** OF IRON OR STEEL.

BAND SAW MILLS, with Friction or Steam Feed.

STEARNS' Fractional Head Blocks, Edgers, Cut-Off Saws, Trimmers.

The Wilkin Pony Gang. No foundation. Capacity 30 000 to 40,000 feet of Flooring per day. The Wilkin Heavy Gang Saw Mill for large mills. Lath and Picket Mills, Bolters, Conveyers, &c.



PATENT

Wood-Working Machinery

Of the Latest and most Improved Designs for

Planing Mills, Furniture Factories, Chair Factories, Car and Agricultural Works, Carriage and Buggy Shops and

GENERAL WOOD WORKERS,

MANUFACTURED BY

THE EGAN CO.

(Successors to the Cordesman & Egan Co.)

228 to 240 W. Front St. Cincinnati O., U. S. A.

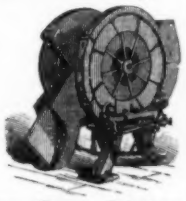
Thos. P. Egan, Pres. Ed. Ruthven, Sec. F. Danner, Supt

E. & B. HOLMES,

BUFFALO, N. Y.

MANUFACTURERS OF

BARREL MACHINERY.



Chamfering, Howeling and Crozing Machines, Stave Dressers, Stave Jointers, Hoop Drivers, Crozing Machines, Heading Jointers, Heading Dressers, Beer Stave Benders, Stave Cutters, Leveling and Trussing Machines, Cylinder Stave Saws, Heading Saws, etc.

—STAVE, BARREL, KEG AND HOGSHEAD MACHINERY.—

Correspondence solicited. Mention this paper.

ESTABLISHED 1845. **The Oldest Saw Manufactory in the South.**

TOLAND & SON, 85 N. Front Street, Baltimore.

Particular attention paid to Large Circular Work. We warrant our Circular Saws to stand more strain, without buckling or cracking, than any other make We make all kinds of Tough-Tempered Circular, Mill, Cross-Cut, Band and Drag Saws, Planer Knives, Ensilage, Feed, Tobacco, Meat Choppers, and other Knives made to pattern, and Moulding Bits warranted equal to the BEST. N. B.—We make no charge for hammering any Large Circular Saw that we can't make "go." GIVE US A TRIAL, and for *toughness* of *temper*, *durability* and *quality* of *material*, compare our work with the best you have ever used.

THE BILLINGS & SPENCER CO. HARTFORD, CONN.

MANUFACTURERS OF

STANDARD MACHINE WRENCHES

SINGLE AND DOUBLE END

IN 16 SIZES.

DROP FORGED OF BAR STEEL

TAKING NUTS FOR ¼ INCH

UP TO AND INCLUDING

NUTS FOR 1¾ INCH BOLTS

AND ALL DESCRIPTIONS OF STEEL AND IRON DROP FORGINGS.

SOUTHWARK FOUNDRY AND MACHINE CO.

ENGINEERS AND MACHINISTS,

WASHINGTON AVE. AND FIFTH ST., PHILADELPHIA, PA.

PORTER-ALLEN and SOUTHWARK ENGINES, BOILERS and TANKS!

Blowing Engines, Bessemer Converters, Gas Apparatus,

SUGAR MACHINERY HYDRAULIC MACHINERY, &c., &c.

BROWN & KING, MANUFACTURERS OF

COTTON MILL SPECIALTIES.

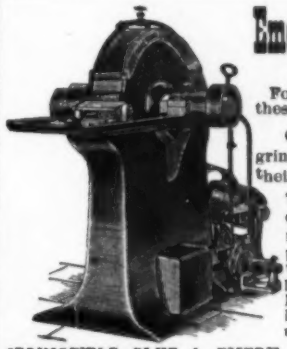
Roller Covering, Loom Pickers and Strapping.

Dealers in Roller Coverers, Stock and Tools; Cotton and Woolen Mill Supplies.

Full Line "Hick's" United States Standard Ring Travelers, Mill Wire Goods, Spring Cotters, Belt Hooks, Lacing, &c., kept constantly on hand.

Wrought Iron Pipe Fittings and Brass Goods. Southern Agents for the celebrated "B. C. & D. Oak Tanned Patent Lap Belting, Galvin Compound Wedge Gate Valve, Imhauser's Watchman Time Detectors, Diamond Emery Wheel Machine Co., &c.

Office and Salesroom No. 62 S. Broad Street, ATLANTA, GA.



Emery Wheel Tool Grinder.

Pat. Sept. 25th, 1883.

Four sizes of each of these designs.

Grinds much FASTER than grindstones and will soon save their cost. WHEELS ARE MADE TO RUN IN WATER. Will ship on their merits for 30 days' trial, and if not satisfactory can be held subject to our order We make the largest line of machinery with Emery wheels running in water of any company in the world.

SPRINGFIELD GLUE & EMERY WHEEL COMPANY. SPRINGFIELD, MASS.

WE SOLICIT CONTRACTS FOR

COTTON SEED OIL MILLS,

INCANDESCENT LIGHT FOR MILLS,

STEAM POWER FOR FACTORIES,

ROLLER OR BURR FLOUR MILLS.

SPECIAL AGENTS FOR

The Westinghouse Engine, The Smith-Vaile Oil Mill Machinery,

The Westinghouse Electric Machinery, The Smith-Vaile Pumping Machinery.

D. A. TOMPKINS & CO.

Engineers and Contractors, - - CHARLOTTE, N. C.

ATLANTA RUBBER COMPANY

ATLANTA, GA.

RUBBER BELTING,

PACKING, HOSE, &c.

PURE OAK LEATHER BELTING,

MILL SUPPLIES AND

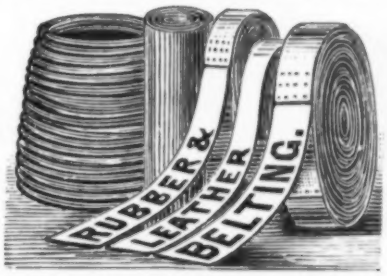
ALL KINDS OF RUBBER GOODS.

AGENTS:

NEW YORK RUBBER CO'S BELTING, &c.

HOYT'S LEATHER BELTING.

NEW JERSEY RUBBER SHOE CO



Portable Mills AND Millstones

FOR ALL PURPOSES.

DeLOACH WATER WHEELS fully equal to the best and about **half** the usual price. Improving water powers a specialty.

Flour and Corn Mill Outfit Complete Only $600.

Send for our illustrated catalogue and special prices on anything needed in a mill of any kind

Do not buy until you have first secured our prices

A. A. DeLOACH & BRO.

ATLANTA, GA.

Durham Bobbin and Shuttle Mills

—MANUFACTURERS OF—

Bobbins, Spools, Skewers & Shuttles,

of All Kinds and Descriptions. Complete Line of

Wooden Supplies for Cotton and Woolen Mills.

A Southern Enterprise, with new Mills, fully equipped with all Modern Machinery, and all work guaranteed. Mention this Paper in corresponding.

J. C. ANGIER, President.

MURRAY HILL HOTEL,

Park Ave & 40th St.
NEW YORK.

HUNTING & HAMMOND.

The only Large, First-Class Hotel in the City
Conducted on both the American
And European Plans.

Located one block from Grand Central Depot.

Baggage Transferred to and from GRAND CENTRAL DEPOT Free of Charge.

BAY STATE HOUSE,

WORCESTER, MASS.

W. L. SHEPARD, Proprietor.

This House has been thoroughly repaired and renovated, and will be KEPT STRICTLY FIRST-CLASS IN EVERY RESPECT.

The Only First-Class Hotel in the City. **Rates, $3.00 and $3.50 per day**

Massasoit House,

SPRINGFIELD, MASS.

M. & E. S. CHAPIN, Proprietors,

Near the Union Depot.

THOROUGHLY FIRST-CLASS.

Colonnade Hotel,

Chestnut St., Cor. 15th,

One block rom new Penna. Railroad Depot

PHILADELPHIA.

H. J. & G. R. CRUMP.

A FAVORITE RESORT FOR ALL SOUTHERN TRAVEL.

REOPENED SEPT. 1st.

Enlarged. Elegantly Furnished. All Modern Improvements.

THE DENNISON

MAIN & FIFTH STREETS, CINCINNATI, OHIO.

E. B LODWICK, J. FREY, } Props.

RATES, 2.00 AND 2.50 PER DAY.

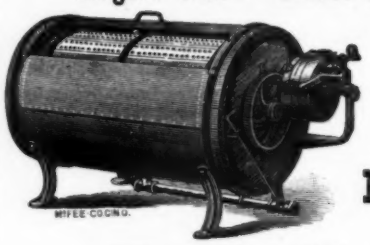
To Secure **SOUTHERN TRADE**

ADVERTISE IN THE

MANUFACTURERS' RECORD.

Laundry Machinery.

Largest Stock. Latest Improvements. Fullest Line.



Washing Machines,
Ironing Machines,
Centrifugal Machines,
Mangles, Wringers, etc.
BOILERS AND ENGINES.

—OUTFITS FOR—

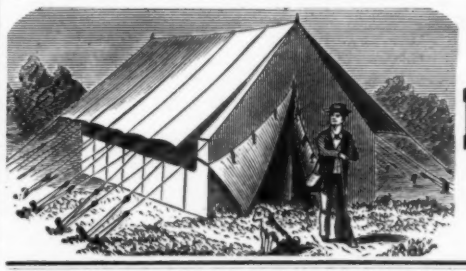
Hotels and Public Institutions

—A SPECIALTY.—

The A. M. DOLPH CO.

295 Wabash Avenue, CHICAGO, ILL.

Cor. 9th St. and Freeman Ave, CINCINNATI, O.



J. W. LOANE

MANUFACTURES

Flags, Awnings, Tents,

No. 13 N. GAY STREET,

BALTIMORE, MD.

—ISSUES— POLICIES OF INSURANCE AFTER A CAREFUL INSPECTION OF THE BOILERS,

HARTFORD STEAM BOILER INSPECTION AND INSURANCE CO.

Covering all Loss or Damage to **Boilers, Buildings and Machinery**

ARISING FROM STEAM BOILER EXPLOSIONS.

☞ The Business of the Company Includes All Kinds of Steam Boilers.

Full information concerning the plan of the Company's operations can be obtained at the **COMPANY'S OFFICE, Hartford, Conn.,** or at any agency.

M. ALLEN, Prest. **W. B. FRANKLIN, Vice-Prest.** **J. B. PIERCE, Sectv**

—BOARD OF DIRECTORS:—

J. M. ALLEN, President.
LUCIUS J. HENDEE, President Ætna Fire Insurance Co.
F. W. CHENEY, Asst. Treas. Cheney Bros. Silk Mfg. Co.
CHARLES M. BEACH, of Beach & Co.
DANIEL PHILLIPS, of Adams Express Co.
G. M. BARTHOLOMEW, Pres't American National Bank.
R. W. H. JARVIS, Pres't Colt's Fire Arms Mfg. Co.
THOMAS O. ENDERS, Secretary Ætna Life Insurance Co.
LEVERETT BRAINARD, of Case, Lockwood & Brainard.
GEN. WM. B. FRANKLIN, Vice-President Colt's Patent Fire Arms Manufacturing Co.
GEO. CROMPTON, Crompton Loom Works, Worcester.
WILLIAM ADAMSON, of Baeder, Adamson & Co., Phila.
HON. THOMAS TALBOT, Ex-Governor of Massachusetts.
NEWTON CASE, of Case, Lockwood & Brainard, Hartford.
NELSON HOLLISTER, of State Bank, Hartford.
CHAS. T. PARRY, of Baldwin Locomotive Works, Phila.
HON. H. C. ROBINSON, Attorney-at-Law, Hartford.

LAWFORD & McKIM, Agents for Maryland, 22 Second St., Baltimore, Md.

ESTABLISHED **POOLE & HUNT,** —1851—

Founders and Machinists.

POOLE & HUNT'S

LEFFEL TURBINE WATER WHEEL,

Prices as Low as any other First-Class Wheel.

Machine Moulded

MILL GEARING.

Our plant for the production of MACHINE-MOULDED MILL GEARING is unequaled in the country, and we are prepared to fill orders with dispatch and at GREAT SAVING IN COST OF PATTERNS.

Shafting, Pulleys,

HANGERS, PEDESTALS.

SHAFTING, PULLEYS, HANGERS and COUPLINGS, of latest and most approved designs.

N. B.—Shipping facilities the best in all directions.

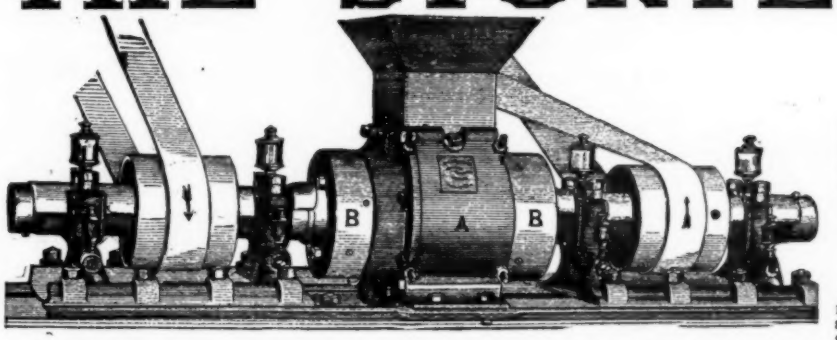
Send for Pamphlet. Send for Price-List.

List of our Gearing Mailed on Application.

POOLE & HUNT, BALTIMORE, MD.

E. C. HUXLEY, Pres. T. L. STURTEVANT, Treas.

THE STURTEVANT MILL.



ROCK CRUSHER

—AND—

PULVERIZER COMBINED.

FOR GRINDING AND CRUSHING

Ores, Phosphates, and Other Hard Substances.

Developing an entirely **NEW PRINCIPLE.** Avoiding the usual wear and tear of machinery, and doing in a much more rapid and thorough manner the work of **a crusher and stamp mill combined.** The attention of all those interested in the crushing or grinding of Ores, Phosphates, and other hard substances, is called to the absolute **originality** of this invention, as it is the first mill ever constructed **where the rock is made to grind itself.** The expense of wear and tear is 75 per cent. less than any machine ever invented. No expensive foundations. No skilled labor required. One mill equal to a 30-stamp battery and crushers combined, occupies space of 12 feet by 4 feet in width. **These machines are in operation on a large scale.** Every mill warranted to do all claimed for it. Send for catalogues of this wonderful machine and full information.

FRASER & CHALMERS, Sole Manufacturers,

45 Fulton Street, Chicago. **2 Wall Street, New York.** **11 Calle de Juarez, Chihuahua, Mexico.** **423 Blake Street, Denver.**

STURTEVANT MILL CO., 89 MASON BUILDING, BOSTON, MASS.

Established 1879.

THE FITZMORRIS and SMITH, FOUNDRY FACINGS AND SUPPLY CO.

Write for Prices.

INVENTORS AND MANUFACTURERS.

OF ALL KINDS OF FOUNDRY FACINGS.

DEALERS IN FOUNDRY SUPPLIES.

AND IMPORTERS GRAPHITE, PLUMBAGO

AND DEALERS IN AND BLACK LEAD.

KINDEL & CENTRAL AVE'S, CINCINNATI, OHIO.

OUR Heavy Stove Plate Return Facings,

AND OUR

New Heavy Machine FACINGS & BLACKINGS Are the Best in the World

Sea Coal, Stone Coal, Charcoal Soapstone Facings, Etc.

MONK'S MOLDERS TOOLS.

Satisfaction Guaranteed.

SAVE MONEY

—BY—

Building Your Own FENCES.

THE LITTLE GIANT

Portable FENCE Loom

Weaves a Substantial Fence in position on posts over level or hilly ground. Cheaper and more durable than any other Fence made.

The Following are some of the Reasons why the LITTLE GIANT FENCE LOOM is the Universal Favorite:

1st. It being the **first perfect machine,** and **fully covered by Patents** issued in 1884, the purchaser need have no fear of trouble in using it. It is **no experiment;** it has been **thoroughly tested.**

2d. It is the **simplest** and **easiest worked,** having no bed platforms to haul about or stake down, or levers, ratchets, or clap-traps to get out of order, or break.

3d. The **wires** can be **stretched the full length of fence** desired, **before** commmencing to weave.

4th. It will weave, with ease, **two, three, four or five** double strands of No. 8 to 16 wire, and any size pickets, from common building lath to those two inches thick, and any width.

5th. It is the **only machine** that will make a **perfect fence** over rough or uneven ground, up hill or down, or over a stream, as it has no cumbersome platform or weighty attachments.

6th. It will weave in old boards, rived slats, cane, willows; in fact, whatever you have or can procure the cheapest, can be used for pickets.

7th. It makes a fence at **one-third the cost,** three times as strong, and five times as durable as plank fencing.

8th. It makes a fence that **can not injure stock,** and at the same time is a perfect protection against cattle, hogs, rabbits and poultry.

9th. It will **keep sheep safe,** as no dog or wolf can jump it.

10th. It is so simple in construction that **any ordinary farm hand can use it.**

To sum it all up, **you can not afford to be without a Little Giant Portable Fence Loom.**

A cut showing the manner of operating will appear in this space shortly. Send for Illustrated Circular with full particulars. Mention this paper.

MANUFACTURED BY THE

RICHMOND CHECK ROWER CO., Richmond, Ind.

—DISCOUNT TO THE TRADE.—

E. C. ATKINS & CO.

INDIANAPOLIS, IND. MANUFACTURERS OF MEMPHIS, TENN.

Circular, Cross-Cut AND Band Saws.

E. C. ATKINS & CO. INDIANAPOLIS, IND.

HAVE YOU A BAND MILL

Or Are You Going to Erect One?

OUR BAND SAWS

Are winning the favor of Lumber Manufacturers for their excellent and uniform temper and for the quality of Steel we use in their manufacture.

—WRITE FOR PRICES.—

SPECIAL STEEL AND TEMPER

Use only the best Cross-Cuts. Our Cross-Cuts are acknowledged as incomparably the best in use.

☞ *We are agents for Tanite Emery Wheels and Grinding Machinery.*

Chapman Valve Mfg. Co.

MANUFACTURERS OF

STEAM, GAS AND WATER

Valves and Gates.

Fire Hydrants

With or Without INDEPENDENT VALVES.

General Office and Works,

INDIAN ORCHARD, MASS.

Treasurer's Office,

Mason Building, 72 Kilby and 112 Milk Sts., Boston.

☞ALL WORK GUARANTEED.

Send for Descriptive Circulars and Price-List. Correspondence solicited.

Stokes & Parrish Machine Co.

PASSENGER AND FREIGHT, HYDRAULIC, STEAM AND BELT POWER.

HOISTING MACHINERY FOR MINES, BLAST FURNACES, INCLINED PLANES, AND DOCK USE.

ELEVATORS

SAFETY, SPEED AND ECONOMY.

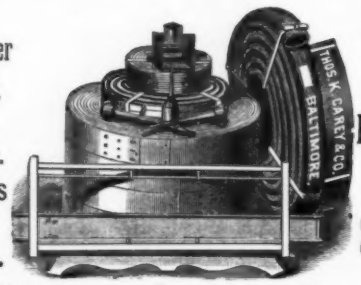
WORKS AND OFFICE:
30th and Chestnut Sts.,
PHILADELPHIA.

BRANCH OFFICE:
95 & 97 Liberty Street,
NEW YORK.

THOMAS K. CAREY & CO.

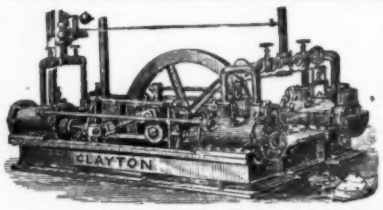
Leather Belting,

AGENTS FOR
Boston Belting CO's Rubber
Belting Packing Hose. &c.
"J. B. HOYT'S" SHORT LAP
Leather Belting.
T. K. EARLE MFG. CO'S
MACHINE
Card Clothing.



COTTON, WOOLEN AND Flour Mill Supplies MECHANICAL RUBBER GOODS, &c.

No. 25 S. CHARLES STREET, BALTIMORE, MD.



"CLAYTON"

AIR COMPRESSORS.

Rock Drills, Mining Pumps, General Mining Machinery. For Catalogues, Estimates, Etc., address

CLAYTON AIR COMPRESSOR WORKS,

Office, 43 Dey Street, NEW YORK.

BUFFALO CUPOLA and FORGE BLOWERS

PORTABLE FORGES,

Blacksmiths' Hand Blowers,

STATIONARY BLAST FORGES,

HEATING AND ANNEALING FURNACES.

Buffalo Forge Co.

490 BROADWAY, BUFFALO, N. Y.